Inequalities in Health and Wellbeing Among Elderly Populations: A Case Study of Central Uganda

by

Andrea Rishworth

A thesis

presented to the University of Waterloo

in fulfilment of the

thesis requirement for the degree of

Doctor of Philosophy

in

Geography

Waterloo, Ontario, Canada, 2019

Author's Declaration

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Statement of Contributions

Exceptions to sole authorship:

Chapter 3:

Rishworth, A., Elliott, S.J., Kangmennaang, J. (2019). Social determinants of subjective wellbeing among the elderly: a case study of Uganda. *International Journal of Wellbeing*. (accept with revisions).

Chapter 4:

Rishworth, A., Elliott, S.J. "It's survival of the fittest": Ageism, Health and Wellbeing in Uganda. *Geoforum* (under review).

Chapter 5:

Rishworth, A., Elliott, S.J. Global discourses and local disconnects: Experiences of gender, aging health and wellbeing in Uganda. *Annals of the American Association of Geographers* (under review).

I hereby declare that as lead author on all three manuscripts, I was responsible for the research conceptualisation, data collection and analysis. I was also responsible for drafting and submitting all the articles for publication in the respective peer-reviewed journals. I also addressed all the comments from peer-reviewers. The other co-authors adopted a supervisory role, providing directions in data collection and feedback on draft manuscripts. Dr. Susan Elliott, as the primary supervisor, provided significant direction and editorial assistance.

Abstract

Sub-Saharan Africa (SSA) has the fastest aging population in the world. Yet its older population has the lowest life expectancy, lowest ratings of subjective wellbeing, and greatest burdens of disease in old age globally. While it is widely recognized that place processes have both positive and negative effects on health and wellbeing in old age, little attention has been given to the multiplicity of place processes that shape health and wellbeing in SSA. This is despite renewed calls from the World Health Organization (WHO) in its Global Strategy and Action Plan on Aging and Health (GSAP) for immediate actions on health and wellbeing in old age.

This thesis explores the aging-health-place nexus in the Greater Mukono area of Central Uganda. The research focused on three broad objectives: first, to investigate the relationship between age and subjective wellbeing among older adults; second, to examine the socio-cultural, environmental and political-economic drivers of health and wellbeing in old age; and finally, to examine how gender inequalities over the life course shape health and wellbeing in old age. Drawing on (feminist) political ecology (of health), a social determinants of health framework, and a life course perspective, a mixed method case study approach— involving a survey, in-depth interviews with older men, women and key informants, along with focus groups— was used in the research.

The findings from structural equation modelling suggest there are two main pathways through which determinants mediate the age-subjective wellbeing (SWB) relationship, varying by gender. First, social determinants more strongly and positively mediate the age-SWB relationship for women. Second, structural determinants more strongly and positively mediate the age-SWB relationship for men. Results from focus groups (n=15) and key informants (n=34) extend knowledge on the drivers of health,

revealing how discriminatory and stereotypical beliefs about old age, at both institutional and interpersonal levels, have direct and indirect effects on aging bodies in multiple domains— political-economic, sociocultural, environmental— which together become embodied in deleterious physical and psychosocial health and wellbeing. Further, findings from in-depth interviews (n=53) and key informants (n=34) reveal the wellbeing of aging men and women is an amalgamation of embodied gendered experiences and social dynamics that are (re)produced and (re)articulated across the life course. The findings expose a counter narrative to the global representation of gendered aging inequalities, illuminating how gender and age are experienced and navigated in sometimes unexpected and contradictory ways.

This research makes important contributions to knowledge, policy and practice. Theoretically, this research contributes knowledge on age-relationality and intersectionality, along with an enhanced understanding of the multiscale and multitemporal processes shaping the aging-health-place relation. Likewise, extending the WHO Social Determinants of Health framework to the study of subjective wellbeing provides the conceptual space to operationalize environmental barriers for wellbeing in old age, providing a framework for future operationalization of the GSAP domains. Methodologically, this research contributes to the conceptualization and identification of health and wellbeing determinants in old age in a SSA context; provides an example of how to employ an integrated knowledge translation approach to improve knowledge and understanding of health inequalities in old age; addresses methodological calls for integrated knowledge translation approaches on aging and health to enhance the likelihood that findings are both useful and translatable for programs, practices and policy; and contributes knowledge on the connections between people, health and place across time and over space through the application of qualitative history approaches, particularly event history calendars.

Substantively, this research contributes to the geographies of aging literature, increasing understanding of aging experiences and the environmental factors (e.g. socio-cultural, economic, political, physical/built) that affect health and wellbeing outcomes in Uganda. This research brings forth new issues for consideration in the geographies of aging (e.g. implications of changing climates; gender-based violence; water and sanitation; double burdens of disease; demographic conflict) underscoring the importance of examining both social and physical environmental processes in health and wellbeing outcomes. Moreover, it fills important knowledge gaps identified by the WHO GSAP. In terms of policy, this research highlights that government actions are needed to implement: the National Policy for Older Persons through the provision of pensions schemes; the development of social groups and support systems; and strategies that address societal ageism, ill equipped health systems, gender norms, and environmental (natural, built) conditions. Equally, the government should provide opportunities for older people to be included in policy decisions and implementation, as well as put health in all policies to ensure health across the life course and positive outcomes in old age.

Acknowledgements

Many people deserve thanks for their support and encouragement throughout this thesis process. First, to my supervisor, Dr. Susan Elliott, I cannot thank you enough for your never-ending support and encouragement. I am forever grateful for the countless opportunities you've given me, the time you've spent training me, and the wonderful memories I have working with you. You have truly been instrumental in my life. Thank you from the bottom of my heart for helping me grow as an academic and as a person. To Dr. Isaac Luginaah, thank you for bringing me into the world of health geography and taking a chance on me those many years ago. To Dr. Rhona Hanning, thank you for your ongoing support and invaluable insights during this research. To Dr. Mark Skinner, thank you for bringing me into the world of aging and continuously supporting me throughout this process.

To my parents, thank you for instilling in me a passion for learning, hard work and perseverance. Your unconditional love, encouragement and wisdom has made this journey possible. Thank you for everything you've done for me. To my brother Alan, thank you for your humour, perspective and support. It is greatly cherished. My sincere appreciation and gratitude to all the participants in this research, still living and those since past, who took the time to share their life stories and experiences with me. Your strength, perseverance and tenacity are immeasurable. I promise to work hard to have your voices heard. To ROTOM, thank you for welcoming me and giving me the opportunity to work with your organization. Your passion and dedication to your work is truly amazing. A special thank you to Zacharia Malawa and Milly Bulenga for your extraordinary assistance, skills and friendship throughout this research process. I couldn't have asked for better research assistants.

I am fortunate to have a supportive group of colleagues across campus. First, to the GoHelp lab, thank you for your friendships, laughs, discussions and assistance throughout this process. A special thank you to my big sister, Jenna Dixon, for everything you've done for me in my life. I don't know where I would be without you. A big thank you also to Elijah Bisung, George Attim, Kristen Brown, Francesca Cardwell, Joseph Kangmennaang, Emily Schantz, Stephanie Lu, Shawna O'Hearn and Adrian Buttazzoni for your support, both personally and academically. I would also like to thank my old brothers and sisters at Western University for providing me with a strong basis to grow. Second, to the Centre for Teaching Excellence to providing me with guidance, support and numerous opportunities during my degree. Lastly, I would like to acknowledge the generous support from the Queen Elizabeth Scholarship, the Network for Aging Research at the University of Waterloo and the travel support from the Canadian Institutes of Health Research.

I am forever grateful and humbled to have had this opportunity to engage with such incredible people and organizations.

Table of Contents

List of Figures

List of Tables

List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ARCAD	African Research Centre for Aging and Dementia
ART	Anti Retroviral Therapy
CCGHR	Canadian Coalition for Global Health Research
COHESU	Community Health and Support
ED	Executive Director
FAO	Food and Agriculture Association
FG	Focus Group
FPE	Feminist Political Ecology
GRAMMS	Good Reporting of a Mixed Methods Study Guidelines
GSAP	Global Strategy and Action Plan on Aging and Health
HIV	Human Immunodeficiency Viruses
iKT	Integrated Knowledge Translation
IDI	In-depth Interview
KI	Key Informant
KT	Knowledge Translation
LCP	Life Course Perspective
LMIC	Low-middle income country
MIPPA	Madrid International Plan of Action on Aging
MOH	Ministry of Health
MoGLSD	Ministry of Gender, Labour and Social Development
MRC	(Ugandan) Medical Research Council
NCD	Non-communicable disease
NGO	Non-Governmental Organization
OVCs	Orphans and Vulnerable Children
PE	Political Ecology
PEH	Political Ecology of Health
RA	Research Assistant
ROTOM	Reach One Touch One Ministries
TASO	The AIDS Support Organization
SAGE	Study of Global Aging and Adult Health (SAGE)
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa SAGE Study on Global Aging and Health
UBS	Uganda Bureau of Statistics
UCU	Uganda Christian University
UDHS	Uganda Demographic Health Survey
UGX	Ugandan Shillings
UN	United Nations

UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
URA	Uganda Reached the Aged
UVRI	Uganda Virus Research Institute
WHO	World Health Organization

Chapter One

Introduction

1.0 Research Problem

Population aging— the process by which older individuals become a proportionally larger share of the total population—is a distinct demographic trend of the twenty first century and is poised to become the next global public health challenge (Harper 2015; Suzman, 2015). While the timing, speed and scale of population aging varies, by 2050, the global older population (60 years+) is projected to increase from 1 billion to 2.1 billion— outnumbering children (0-10 years), adolescents and youth worldwide (10-24 years) (UN, 2017).

In one regard, population aging is a demographic success story. Advancements in public health, living conditions, along with medical technologies mean that people are living longer than ever before; individuals at age 60 can expect to live an additional 20 years in many global contexts (UN, 2017). Yet, as life expectancy increases in many global contexts, huge variations exist within and between global regions; there is a 38-year difference in life expectancy at birth, a 37-year difference for healthy life expectancy at birth, and a 13-year difference in life expectancy at age 60 between high and low-middle income countries (LMICs), with the lowest life expectancy in sub-Saharan Africa (SSA) (WHO, 2015). Although non-communicable diseases (NCDs) are the dominant cause of death in old age, these deaths occur earlier in LMICs and exact a greater burden of death in old age compared to high income countries (WHO, 2015). Moreover, while subjective wellbeing (i.e. happiness, life satisfaction, positive emotions) generally increases with increased age in high income countries, the relationship between age and subjective wellbeing in LMICs is largely negative (Steptoe et al., 2015). Of all global regions, SSA has

both the lowest ranking of subjective wellbeing (SWB) among elderly men and women, and highest prevalence of worry, stress, and unhappiness with increased age (Steptoe et al., 2015; Deaton & Tortora, 2015). This trend is particularly concerning given that SSA is expected to see the largest global absolute rise of its elderly population by 2050, from 40.6 to 214 million (UNDESA, 2015).

In response to these global aging dynamics, the World Health Organization (WHO) put forth a Global Strategy and Action Plan on Aging and Health (GSAP) to promote 'healthy aging' — the process of developing and maintaining the functional ability that enables wellbeing in old age (WHO, 2015 pg. 29). In so doing, this GSAP reframes health in old age from a definition based on the absence of disease to one now focused on the promotion of functional ability— all the health-related attributes that enable people to be and do what they have reason to value. The WHO suggests that any policy or program for aging and health should thus enable elderly individuals to do the things in life that promote *wellbeing* — happiness, satisfaction and fulfillment (WHO, 2016; UNDP, 2015). Thus, to promote functional ability and ultimately wellbeing, the WHO suggests a person's *intrinsic capacity* (i.e. the composite of all physical and mental capacities of the individual), their *environment* (i.e. the factors extrinsic to the individual), and the interaction between the two must be examined. Doing this provides the ability to identify both individual characteristics (e.g., osteoarthritis, diabetes, impaired vision) and the resources and/or barriers in the environment (e.g. clean/dirty water, (in)accessible transportation, (in)accessible social services) that determine what older people can do and value.

The WHO contends that action promoting health in old age is critically important because population aging is inextricably linked with many other global public health agendas, particularly in relation to universal health coverage, noncommunicable diseases and disabilities, and the Sustainable

Development Goals. The WHO argues that "without considering the health and wellbeing of older adults, many of these agendas do no make sense or will simply be unachievable" (WHO, 2015, pg. 4).

While the GSAP offers a unique opportunity to define goals, strategies and activities to respond to the health challenges of the world's aging populations, the empirical, conceptual and theoretical utility and application of this framework remains limited. The following section discusses these limitations.

1.0.1 Empirical Limitations

First, while a large body of literature debates healthy aging and its determinants, discussions remain geographically skewed to high income countries (see: Diener et al., 2011; Bowling & Dieppe, 2005; Sarvimäki, & Stenbock, 2000; Wiles et al., 2011) — despite 80% of the world's aging occurring outside these contexts (UNDESA, 2015). This in part is due to age restrictive practices that fail to include older populations (60 years+) in surveys and data collection (e.g. demographic health surveys) combined with a general neglect to the aging demographic by academics and policy makers alike (Lloyd- Sherlock, et al., 2018; WHO, 2016).

Extant empirical literature on aging in LMICs enhance our understanding of particular health issues affecting the older populations (e.g. chronic disease, HIV/AIDS, infectious disease, loneliness) (see: Lloyd Sherlock, et al., 2014; Arokiasamy et al., 2015; Siriwardhana et al., 2018), but much of this remains overly descriptive, lacking in theoretical framing, and wanting in underlying explanatory factors. While studies do point to particular drivers of poor health (i.e. lack of health care, childcare burdens, isolation), current literature lacks understanding of the "broader social determinants of health and pathways leading to healthy aging trajectories across the life course" (WHO, 2015 pg. 10). Studies often examine frequencies and occurrences of specific diseases or health/functions (Aboderin, 2016), but most lack insight into the processes and causal pathways that produce such outcomes, let alone how these

factors differ by age, gender, and place (Aboderin, 2016; 2015; WHO, 2016). As indicated by the WHO, "many basic questions remain to be answered…new methods are needed that capture trajectories of healthy aging and their determinants, outcomes and distributions across the life course" (WHO, 2016, pg. 21).

Still, while some studies employ qualitative methodologies to explore aging-health issues in the SSA context (see: Schatz et al., 2019; Schatz et al., 2018), many rely on national data sets, most often the World Health Organization Study of Global Aging and Health Studies (SAGE). While SAGE data unequivocally enhances our understanding of particular aging issues, the WHO states more qualitative research and information is needed to support healthy aging (WHO, 2015). Moreover, approaches that can identify determinants across the life course are critical to provide recommendations for prevention and health promotion (WHO, 2015). Although geographers have called for oral history approaches to explore connections between people, health and place across time and over space (Andrews et al., 2006; Andrews et al., 2007), few studies connect life course processes with health outcomes in old age, particularly in LMIC contexts (WHO, 2016). Without addressing these gaps and generating grounded knowledge on the processes and causal pathways that produce health realities for older individuals in LMIC contexts, any attempt to promote 'healthy aging' will lack utility .

1.0.2 Conceptual Limitations

Second, while the focus on "healthy aging" recognizes the environment as an important factor in shaping health, the GSAP does not operationalize the environment into different domains nor does it explain how environmental processes directly or indirectly affect health. No conceptual consideration is given to the multiplicity of spatial processes — sociocultural, economic, geopolitical — and place specific factors — biophysical environment, built environment, social relations — that intersect to

produce health in situ (see: Cesari, et al., 2018). This not only sidesteps a discussion of structural health determinants (i.e. policies, regulations, funding), it renders mute any discussion of the importance of *place* as an active agent in health production (see: Gatrell & Elliott, 2014; King, 2017). By neglecting to consider how 'place matters' as a determinant of health in old age, any program or policy touting the promotion of 'healthy aging' is likely to be ineffective. Without explicitly recognizing that *place* is a dynamic process integrated with physical, social, emotional, and symbolic aspects which interact at a range of scales (Massey, 1999; Wiles, 2005), new 'healthy aging' approaches run the risk of simply transposing programs and policies 'wholesale'. A more careful consideration of the environments in *place* is needed because solutions to health problems are not always globally "scalable" (Adams, et al., 2013). Even though scholars have called for explicit consideration to the role of place in shaping aging and health outcomes (see: Skinner & Andrews, 2014; Rishworth & Elliott, 2018), attention to these dynamics are limited, especially in the LMICs where *place* is likely to pose greater problems for groups aging in changing or undesirable contexts (Means 2007; Scharf et al., 2005; Rishworth & Elliott, 2018).

1.0.3 Theoretical Limitations

Third, theories, categories and explanations regarding older adults must be crafted from a wider range of countries and perspectives in order to reflects the needs and concerns of aging individuals in *all* global regions (Sadana, et al., 2016; Aboderin, 2016). Considering theoretical insights regarding the lives of older individuals emanates predominantly from high income Western countries, exploring the realities of older adults in LMICs would generate more inclusive explanations of aging, assist in theory refinement, or produce alternate theories of aging— currently absent in much gerontological literature, particularly in SSA (see: Aboderin, 2016). To this end, research is needed to identify issues and develop theoretical ideas that are grounded in the meanings and motives of SSA actors (Aboderin 2004; 2009).

Despite calls to investigate the interplay between micro (individual), meso (family, community), and macro structural factors shaping aging realities in SSA (see: Aboderin, 2009; 2016), attention to these dynamics, for the most part, are currently overlooked (Aboderin, 2016).

Moreover, limited theoretical attention is given to the way *age* structures opportunities and constraints over the life course (Calasanti, 2003; 2013; 2018). Although "social scientists have been at pains to demonstrate the ways in which class, race, and gender permeate the whole of life… we have neglected to recognize its [age] full significance as an organizing principle that we all live with all of the time" (Blakie, 1992; 4). More work is needed to theorize the ways age — a social construction of a biological process — and age relations — relations of inequality between and among people of different ages — are embedded in socio-structural and cultural arrangements, intersect with other hierarchies of difference (i.e. social status, ability, gender), and produce inequalities in the aging experience (Calasanti, et al., 2018; Calasanti 2003; McMullin, 2009). The take home message is that alternate understanding of 'healthy aging' in SSA must start by examining determinants of health and wellbeing among older individuals in their contexts, taking into consideration their life histories, diverse identities, and multilayered place processes in order to understand healthy aging and its constituent parts. To date however, such an approach has rarely been executed.

As the world prepares to implement the GSAP, it is widely recognized that addressing these gaps and achieving healthy aging for all requires new approaches to health (WHO, 2015; WHO, 2016; Beard et al., 2016); ones that do no reduce the spatial and temporal analysis of health to that of the individual afflicted body, but rather situate the body within their particular socioecological context (King, & Crews, 2013). This requires identifying appropriate measures (determinants), and breaking barriers (socio-cultural, political-economic, gender, ecological) that continue to hinder opportunities for healthy aging in

resource poor settings such as SSA. That said however, the theoretical utility and influence of multiscale and multitemporal approaches capable of explicating aging, health and place linkages among diverse groups of individuals has received limited attention. This may in part be due to difficulties conceptualizing, determining and measuring the contribution of multiscale (i.e. individual, family, community, national, international) and multitemporal (i.e. different time series) processes on aging, health, and place linkages. To address this knowledge gap, this dissertation integrates a range of approaches (i.e. social determinants of health, political ecology of health, feminist political ecology, and a life course perspective) to explore the aging, health and place nexus in Uganda's Central Region. Together, the approaches enable the exploration and explication of multiscale and multitemporal pathways through which health and wellbeing arise, and how they vary by hierarchies of difference.

First, the Commission on the Social Determinants of Health framework (CSDH) is used to explore the social, economic, political and health system mechanisms that give rise to inequalities in subjective wellbeing among seniors in Uganda (Solar & Irwin, 2010) (Chapter 3). The CSDH framework— underpinned by structural, psychosocial, and ecosocial theory— provides the conceptual space to examine how old age and subjective wellbeing were mediated by particular structural drivers live income and socioeconomic position. Since the CSDH gives less attention to other important determinants of health like historical dynamics, forms of discrimination (e.g. ageism, sexism, etc.) as well as the biophysical properties of place (see: Raphel, 2006; Nayer & Kapoor, 2009: King, 2017), a political ecology (of health) approach is used to examine the multiscale socio-political (e.g. historical dynamics, development policies, economies, etc.) and ecological (climatic conditions) determinants of health, rooting analysis in place (King, 2017) (see: Chapter 4). Incorporating feminist theory in a political ecology (of health) approach further augmented analysis by examining how gendered relations, both

within and beyond the household, shape access to and control over resources in the context of wider political economic systems (see Chapter 5) (Rocheleau et al., 1996; Elmhirst, 2015). This provided the capacity to examine: how gender interacted with age; how these interactions shaped access and control of resources; and how these were implicated in health (Elmhirst, 2015). A life course perspective was further employed (chapter 5), to consider the timings of particular events in the life course (i.e. turning points and transitions), along with their immediate and enduring effects on the remaining trajectory of an individual's life (Elder, et al, 2003; Burton- Jeangros et al., 2015). Together, these 4 approaches form the conceptual basis to address the research objectives.

The **objectives** of this research were:

> Objective 1: Investigate the relationship between age and subjective wellbeing among older adults.
>
> Objective 2: Examine the socio-cultural, environmental and political-economic drivers of health and wellbeing in old age.
>
> Objective 3: Examine how gender inequalities over the life course shape health and wellbeing in old age.

1.1 Aging, Health and Place Nexus

Health and environment are inextricably linked (Gatrell & Elliott, 2014). The places where one lives shape health outcomes, access to services and the broad range of health determinants (Gatrell & Elliott, 2015). One's spatial location and interactions with the physical (natural, built), social, political and economic environments thus shapes health and wellbeing in a multitude of ways (Harrington & Elliott, 2015; Swinburn et al., 2000). The links between the environment and health of populations dates to ancient Greece and Hippocrates' thesis, *On Airs, Waters and Places*, and to later studies on the Broad Street cholera outbreak by John Snow in 1884 (Gatrell & Elliott, 2014).

Over the years, many studies have explored the health-place nexus, highlighting how characteristics of individuals (compositional factors), local physical and social environments (contextual factors) and broader characteristics of place (collective factors) interact to directly or indirectly influence health and wellbeing outcomes (Cummins et al., 2005; Macintyre et al., 2002). This growing body of literature highlights how health is produced by complex people-place relations both within and across scales (e.g. body to the international scale), while simultaneously cognizant of time in the production of health (Macinture et al., 2002; Smyth, 2008). In so doing, place provides a conceptual frame through which to explore the dynamic relationships between contextual-compositional-collective factors that produce health in situ (Neely, 2017; Gatrell & Elliott, 2014; King, 2017). Place as a conceptual frame thus helps illuminate how health is always context specific, co-constructed and maintained by actors (both social and natural) across geographic scales (Cutchin, 2007; Cummins, Curtis, Diez- Roux et al., 2007). This means that place and health are bound in an ongoing socio-natural production (Neely, 2017; Neely, 2015; Nading, 2014).

With older populations comprising a larger share of global populations, the places where people age has become the focus of increased academic and policy attention (Skinner et al., 2018). 'Aging in place'— generally understood as the ability to "remain living at home in the community, with some level of independence" (Davey et al., 2004: pg. 133) features prominently in global discussions and is touted as a means to enhance the health and wellbeing of older populations (WHO, 2015). While the most appropriate 'place' to age remains disputed (Wiles, 2003; Wiles & Rosenberg, 2003), burgeoning scholarship seeks to understand the role of place as a determinant of healthy aging; that is, the ways in which space and place influence the wellbeing of older populations (Cutchin, 2005; Wiles, 2005; Wiles et al., 2009).

The social and physical aspects of homes, neighbourhoods and communities have become important sites of inquiry in the production of health and wellbeing for older adults aging in place (Wiles, 2009, Wahl et al., 2012). Many scholars examine how positive feelings of pride, safety and belonging emerge through the interaction of aging individuals in these 'micro' places, and how these in turn enhance health and wellbeing (see: Andrews & Kearns 2005; Wiles et al., 2009; 2011). Some explore how interactions between aging individuals and their social home environments promote deep and trusting relations that help maintain health and wellbeing (e.g. Walker & Hiller, 2007), whereas others query how natural neighbourhood environments (e.g. parks, gardens) encourage therapeutic effects that enhance feelings of wellbeing for aging individuals (Finlay et al, 2015). Even still, others explore how the aging individual 'fits' in their local environments, highlighting how tangible characteristics of the home or neighbourhood — mobility opportunities, security, proximity and access to amenities — cultivate attachment to place, and enhance the quality of life and wellbeing of older people (Petersson et al 2008; Hillcoat-Nallétamby & Ogg, 2014; Wahl et al., 2012).

Place, however, may not always produce beneficial health and wellbeing outcomes. As geographers increasingly recognize, no place has intrinsic qualities that promote health and wellbeing. Rather, the way people view and interact with place within their broader socio-environmental settings shapes health and wellbeing outcomes (Conradson, 2005). Perceptions, circumstances, attitudes, identities, and culture filter experiences of space and place which in turn influence experiences and outcomes of health and wellbeing (Conradson, 2005). Indeed, as Rowles' (1978) ground-breaking work reveals, older people can become 'prisoners of their space', as they progressively experience shrinking life worlds. This is similar to others' work that highlights that contrary to the oftentimes romanticized notion of 'aging in place' (see: Vasara, 2015), older people do have negative associations with place, like

being “trapped” or “stuck in place”, without having the ability to move to more supportive environments (Wiles, et al., 2012, pg. 360).

In this regard, scholars examine how a variety of social and physical environments (e.g. natural and built) inhibit the health and wellbeing of elders in places of homes, neighbourhoods and communities. Some reveal how feeling ‘out of place in public space’ — in both social (i.e. buses, streets) and natural environments (i.e. bad weather, rain, storms) — negatively affects feelings of health and wellbeing (Milligan, Bingley & Gatrell, 2005), while others illuminate how changing socio-cultural environments intrinsic to *a place*, restrict elders’ daily opportunities for place reintegration, in turn, configuring negative experiences of health and wellbeing for older people (Yu & Rosenberg, 2016).

Underpinning much of this work is an appreciation that ‘aging in place’ is a complex process where the older person continually reintegrates with place, negotiating meaning and identity in the face of dynamic landscapes of social, political, cultural, and personal change (Andrews, et al., 2007). While this work unequivocally enhances knowledge on dynamic aging, health and place relations, further attention is needed in two key areas. First, more work is needed to illuminate the complex aging- health- place relations afflicting the geographies of global aging. Second, more attention must be given to explicating the multiscale and multitemporal place processes that inform health and wellbeing outcomes for aging bodies in situ (see: Rishworth & Elliott, 2019: Skinner et al. 2015). As will be explained in the following section, geographers have an important role to play in elucidating the current and emerging aging, health and place relations across and between all global spheres.

1.2 Health Geography

Health geography is a broad field within geography that reflects geographers’ empirical foci and philosophical perspectives on health and medicine (Kearns & Collins, 2010). Health geographers’

engagement with *place, socio-cultural theoretical frameworks* and *critical geographies of health* are at the core of debates in the early 90's that led to a sub-disciplinary shift from medical geography to geographies of health (Kearns & Moon, 2002; Brown et al. 2011). This shift reflects a move "from concerns with disease and the interests of the medical world in favour of an increased interest in wellbeing and broader social models of health and health care" (Kearns & Moon, 2002; 606). It also reflects a shift in conceptualizing health formation beyond one scale of analysis. Drawing on wider debates within the social sciences, the discipline incorporated structure-agency dynamics, and as such, recognized that health and wellbeing are produced by a multiplicity of processes across scales. In so doing, this transition provided the 'capacity to integrate people and places' and 'the local and the global' (Kearns & Moon, 2002, pg. 614), to reveal how the health of people and the health of place are intrinsically connected (Gatrell & Elliott, 2014).

These disciplinary shifts brought with them new possibilities for incorporating concerns of aging, health, and place into geographical scholarship. Since the aging process naturally involves declining levels of health and the demand for a range of associated services, the health and health care needs of aging individuals and populations has always been an empirical foci of health geographers (Andrews et al., 2007). That said however, the reconceptualization of place as more than a passive 'container' to a 'living construct' repositioned studies on aging and health in the discipline. Studies commonly focus on the aging individual, their body and their lived realities, rather than dwelling on disembodied disease (Kearns & Andrews, 2005; Kearns & Moon, 2002). 'Place' is now a central organizing concept in research on older people, both within and outside the discipline of geography (Kearns & Andrews, 2005).

1.3 Geography of Aging

Geographers who study aging do so directly within the geographies of aging (encompassing work on aging across sub-disciplines, most notably health geography, population geography, social geography) and also within an interdisciplinary field termed "geographical gerontology" (encompassing gerontological work by geographers and geographically orientated work by gerontologists from other disciplines including nursing, planning, social work, and a range of social and health sciences) (Skinner et al., 2015) (see: Figure 1.3). Underlying the field is a longstanding and increasingly nuanced appreciation for the reflexive, transactional, and mutually constitutive relationships between older people and the spaces and places in which and through which age and aging occurs (Cutchin, 2009).

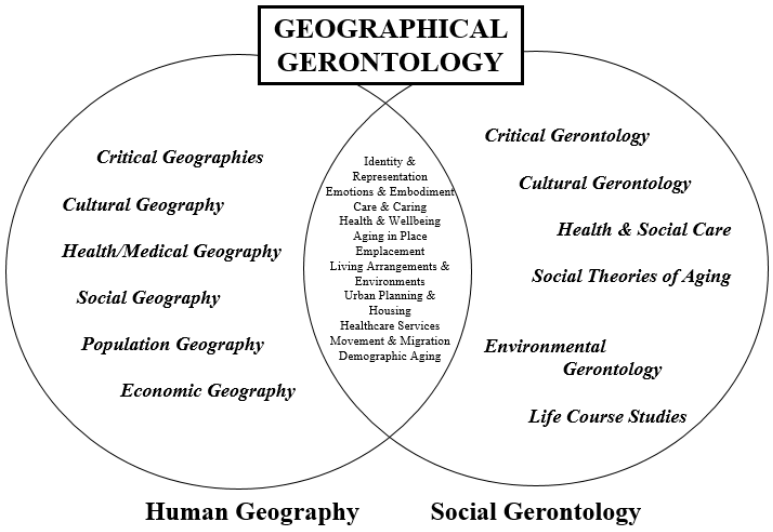


Figure 1.3 Geographies of aging thematic diagram. (Adapted from: Skinner et al., 2015)

Broadly, literature within the geography of aging can be grouped into two categories. On one hand, research emphasizes the concept of space as a means of describing, explaining and understanding the distributions and movements of older people in empiricist and positivist terms (Andrews & Phillips,

2004). Much attention is given to distributions of older populations within spatially defined units (e.g. cities, countries and regions), exploring how older populations move through space in relation to health care, migration trends, or resource distribution (see: Andrews et al., 2018). Others draw on perspectives of political economy to question how production and resource allocation for older populations unfold across space (Skinner, 2007). Generally, this work focuses on 'macro spatial scales' (e.g. international, national, regional), where characteristics and trends of populations, structures and systems are evident (Andrews et al., 2018).

On the other hand, a body of literature examines the complex relationships between people and places (e.g. social, physical, built, symbolic) (Andrews et al., 2007). Drawing from humanist, social constructionist and social constructivist traditions, this work explores the value of human experiences, subjectivity, and agency at the 'micro scale' through 'places' (Andrews et al., 2018). Some studies explore how places are qualitatively experienced by older people, through their literal 'being in the world' (Rowles, 1978), while others query the social constructions and individual perceptions of elderly people in and through places including homes, neighbourhoods and social clubs (Pain et al., 2000; Wiles et al., 2009; Cutchin, 2003). Generally, this work is concerned with understanding older people's perceptions, experiences and challenges at the 'micro scale' where realities and particular nuances of life unfold (Andrews et al., 2018).

A small yet growing third body of literature draws on relational and non-representational theories (NRT) to bring attention to the connections between spaces and places in which aging occurs (Skinner et al., 2015). Recently, ideas of relationality have expanded the recursive production of people and place relations to consider a broader variety of material (i.e. objects, bodies; physical environments) and non-material (i.e. discourses; ideas; beliefs) questions as they relate to aging, place and space. Some explore

issues of mobilities over the life course, considering how aging and space can be analyzed as entwined becomings (Schwanen et al., 2012), while others explore relationships between people and the 'home places' across time and over spaces of neighbourhoods and cities (Cutchin, 2001, 2013). Despite these new 'relational turns', many substantive and theoretical gaps remain (Skinner et al., 2015).

Currently, most aging knowledge derives from 'Western' advanced societies; little consideration is given to the needs, challenges, and dynamics of aging populations globally (Skinner et al., 2015; Rishworth & Elliott, 2019). Though some have begun addressing issues of aging in Asian contexts (Cheng et al., 2011), or among indigenous elderly in Canada (Wilson, 2003), the experience of aging in LMICs, particularly in contexts plagued by poor health and social care, deprived standards of living, infectious disease and vulnerabilities to human-made or natural environmental disasters is a glaring hole in the discipline (Rishworth & Elliott, 2019). The tendency to neglect the nature and implications of aging individuals and populations worldwide, especially in least developed and emerging societies undergoing profoundly diverse demographic realities, makes disciplinary work addressing global aging, all that more pertinent (Rishworth & Elliott, 2019).

Conceptually, while 'place' is the site for both human- non-human interactions in social and physical environments (Neely & Nading, 2017), consideration to these interactions are often considered in isolation (see: Wiles, 2003; Finlay, 2015). Although geographic gerontologists "highlight the importance of human-environment relationships in understanding population aging, geographers traditionally focus on the local contextual and compositional dimensions of older people's lives (i.e. age, sex, social relationships, sociodemographic characteristics) (see: Wiles, 2003), whereas social gerontologists emphasize the environmental aspects of aging (home spaces, built environment, community services)" (Andrews, Milligan, Phillips, Skinner, 2009, pg.1649). Little work queries how

these human- non-human interactions, or in other words socio-environmental aspects of place, work together to enhance or hinder health and wellbeing within and across scales (see: King, 2017).

Theoretically, though space and place have been extensively theorized (see: Moore and Rosenberg, 2001; Wiles, 2005; Milligan, 2009; Andrews et al., 2013), current disciplinary attention rarely theorizes scale, nor its relational processes. Though space and place have not been conceptually isolated from each other per se, "spaces and places have not been considered alongside the other spaces and places in the world that help create them" (Andrews et al., 2013 pg. 3014). While scholars have called for greater disciplinary engagement with relational thinking (see: Andrews et al., 2013; Skinner et al., 2015; Rishworth & Elliott, 2018), geographers have yet to tell 'the whole relational story' (Andrews et al., 2013; Skinner et al., 2015).

Current work in the discipline could be said to impart a 'one dimensional' approach to relational thinking, failing to account for the multi-scalar processes — both immediate and long-term — accompanying age structural change (e.g. declining and moving labour, socioeconomic and political relations, and (in)equality along the life course). When scale is refenced, it is commonly confused with level. That is, analysis focused on a particular region, territory, place or space within a single scale (i.e. international, national, local, home, etc.), or what could be called the "singular connotation" of scale (Brenner, 2001a). While relational processes are explored within a single level, there is a dearth of work that considers the spatial processes that exist across a range of intertwined scales globally (Barnes, 2001). The dominant separation of spatial-temporal factors from their context-specific realities denies discussions of structure and agency, and in turn renders mute explanations of how and why aging matters in a particular place (Giddens, 1984). Likewise, neglecting the 'structuration of scale'— the process whereby agents both reproduce and are constrained by structures — refuses a more conceptually

differentiated and refined analysis of ‘aging in place’ in all global spheres (Giddens, 1984). Though it is important to understand relational processes in a single pane, geographers have an important role to play in explicating the processes which constitute and reproduce the contours of aging worldwide (Rishworth & Elliott, 2019).

What is needed is a discussion of scale, that moves beyond scale as a unit of operation—an epistemological issue—and rather considers the ontological nature of scale— the actual material property of processes (see: Sayre, 2005; Sayre, 2009; Malpas, 2012). As I have argued elsewhere (see: Rishworth & Elliott, 2019) geographers must eschew our common synonymous classification of scale with level and begin exposing the dialectical relations between levels— micro place (e.g. body, home, neighbourhood, community) and macro space (e.g. regional, national, international) — exploring “how scale is produced in and through social activity, which in turn, produces and is produced by geographical structures of social interaction” (Smith, 1993 p 96f). This means conceptualizing scale as more than just a spatial (and temporal) issue, but rather one that is the actual material property of processes (Sayre, 2005; 2009). Although these disciplinary gaps have been highlighted in the literature (see: Andrews et al., 2013; Skinner et al., 2015; Skinner et al., 2018; Rishworth & Elliott, 2018; 2019), little concrete attention has been given to these issues, let alone in a comprehensive manner.

Moreover, while some theoretical attention has been given to the temporal dynamics of older people’s unpredictable, diverse and non-linear life pathways (Hopkins & Pain, 2007; Horschelmann, 2011; Schwanen et al., 2012), more work is needed to examine the temporal dimensions of place perceptions and experiences, the ways historical processes impact upon, as well as create experiences of health and wellbeing in old age, and how the negotiation of everyday life plays out temporally, as a recent

disciplinary reports and others confirm (Skinner et al., 2015; Schwanen et al., 2012). It is these disciplinary gaps this thesis work strives to fill.

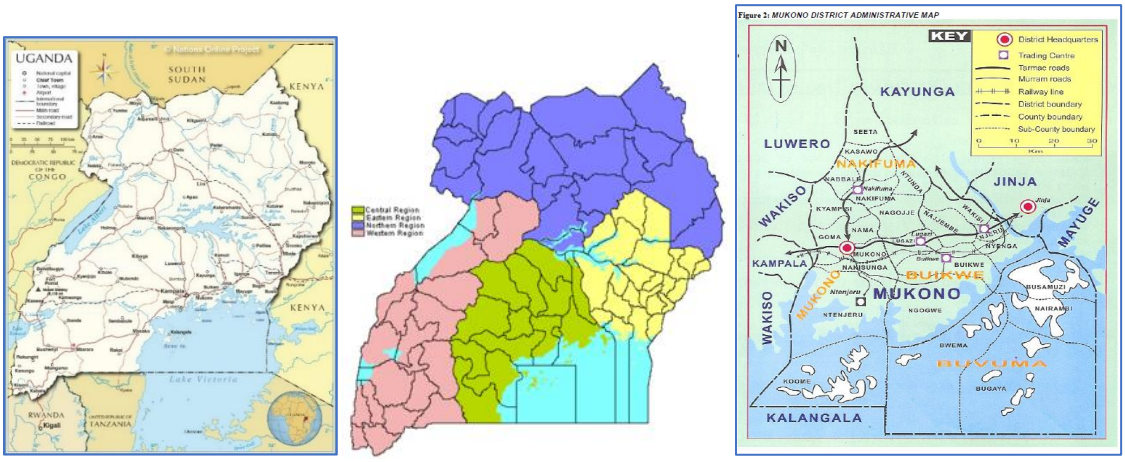
1.4 Study Context

Sub-Saharan Africa (SSA) is the fastest aging global region. By 2050, the number of older people (60 yrs.+) will increase 13-fold from 4.6 million to 215 million – 70 million more than Northern and Western Europe combined, and 40 million more than North America (UNDESA, 2015). Yet, this aspect of SSA's demography has been given little attention in policy, public or academic debates. Instead, the overwhelming focus remains on children and populations of reproductive age. Indeed, over half of the population is below 25 years of age (i.e. 65% below 25 yrs., 8% above 60 yrs.), making it also the youngest region in the world (UNDESA, 2015). Uganda's population mirrors a similar demographic composition. Uganda is home to approximately 40 million people, of which 55% are under the age of eighteen and approximately 2.7% over the age of 60 (approx. 1,304,464, 60 years or older), making it the second youngest country in the world (UN, 2017). Life expectancy in Uganda is currently 62.3— an 18-year difference between the average life expectancy in high income countries, due in part to the country's high HIV/AIDS prevalence (7.2%) and poor public health measures (WHO, 2015; UBOS, 2016). Despite Uganda's relatively low life expectancy, its older population (60+) is projected to grow almost five-fold, from 1.3 million in 2010 to 5.5 million by 2050 (MoGLSD, 2012). Women are expected to represent a larger portion of this growth given that they have a longer life expectancy at birth compared to men (64.8 years and 59.8 years respectively) (IHME, 2017).

Uganda's population is divided between 4 administrative regions, and 127 districts (UBOS, 2016) (see: Figure 1.4). The Central Region houses the largest population (27%) and is coterminous with the

Kingdom of Buganda— one of the ancient monarchies constitutionally recognized in Uganda. Over the last 25 years, Uganda has made great strides in reducing poverty (from 56% to 24.5% between 1992-2010), following a series of structural reforms and decentralized government systems (The Republic of Uganda, 2013). Despite this poverty reduction, between 1992 and 2010, income inequalities within and between regions and subpopulation groups increased (Henry, 2016). The Central region has the highest income inequality (Gini coefficient 0.424), with the poorest living in rural locations. Of all demographic groups, the elderly are the poorest (64% below the poverty line), with 80% residing in rural areas (MoGLSD, 2012).

Figure 1.4 Study Context



Of all SSA countries, Uganda has among the lowest share of the population above legal retirement age receiving a pension (i.e. a regular payment during retirement from an investment fund to which that person or employer contributed during their working life) or social security (i.e. any government system that provides monetary assistance to people with an inadequate or no income); approximately 98% have no form of pension or social security (MoGLSD, 2012; Stewart, Dall'Olio et al.,

2014). Currently Uganda has no universal pension or social security scheme for its population. While the government does have two public sector pension arrangements for formal sector employees [i.e. a government funded Armed Forces Pension Scheme first implemented in 1935 to provide social protection to retired veterans; a government funded Public Service Pension Scheme first implemented in 1946 to provide social protection to all civil servants (i.e. Central Government, police and prison officers, judiciary, doctors, primary and secondary school teachers)], these plans only provide financial support to individuals who were employed in the formal economy and even then, face severe bureaucratic challenges (Kasente, Asingwire, Banugire, Kyomuhenda, 2002; Nyakundi, 2009). Challenges relate to a lack of funding, delayed access to benefits by retired workers, and access to benefits by unqualified beneficiaries, commonly termed ghost pensioners, due to a lack of proper records (Kasente et al., 2002; Stewart et al., 2014). Considering approximately 98% of Uganda's total working population (e.g. 14-64 years) are engaged in the informal sector, many citizens are left out of these schemes (UBOS, 2016). As a result, citizens have the option of investing in two private pensions schemes.

The first private scheme is the National Social Security Fund (NSSF). The NSSF was implemented in 1985 to provide financial security for individual workers in both the public and private sphere, where workers receive a lump sum upon retirement based on returns earned on contributions over time (Kasente et al., 2002; Stewart et al., 2014). The second private pensions scheme is the Occupational Retirement Benefit Scheme (ORBS) implemented in 2011 to provide another pension option beyond the NSSF. The ORBS offers a means for employees of private sector firms to voluntarily supplement their pension arrangements by contributing income during their working years in order to receive a lump sum and/or annual pension payment (depending on scheme rules) (Kasente et al., 2002; Stewart et al., 2014). While these private schemes offer another mechanism to enhance economic security in old age, they face

many challenges related to lost documentation, employer deceit (i.e. employers often understate workers' salary in NSSF schedules in order to remit less money and divert the difference for their private and/or personal use), financial miscalculations, poor management and regulation, lack of redistributive mechanisms, government embezzlement, and time-lags between retirement and the time one receives gratuity (Kasente et al., 2002; Nyakundi, 2009; Stewart et al., 2014). These challenges have created a context where citizens lack public confidence in pension saving systems (Stewart, Dall'Olio et al., 2014). Less than 10% of the working population in Uganda participate in either public or private pension schemes with only 2% actually receiving any benefits (Stewart et al., 2014).

In 2011, the government implemented a 5-year pilot non-contributory social protection program through the Social Assistance Grant for Empowerment (SAGE) program. Funded by the UK's Department for International Development (DFID/UKAID), Irish Aid and UNICEF, SAGE provides a Senior Citizen Grant to beneficiaries of the program in 47 of the countries' 127 districts (Merttens, Sindou, Lipcan et al., 2016; Ibrahim & Namuddu, 2014). Under the SAGE scheme, older persons receive 25,000 UGX every month (~ $7.00 USD), but is paid out every two months. Thus, beneficiaries receive 50,000 UGX shillings every two months. Designed to reduce old age poverty, the SAGE grant provides a minimum level of income security to older persons (Merttens et al., 2016; Ibrahim & Namuddu, 2014) While there is some evidence that SAGE benefits seniors and their dependents by providing them with income for nutrition, health care and animal rearing (Mertten et al., 2016; Nalwanga & Lund, 2018), the program only enrols 100 of the oldest individuals in each sub-county of each selected district (Nalwanga & Lund, 2018). Owing to the demand for the SAGE program in all districts, the Parliament of Uganda in 2017 passed a resolution to roll out the grants to all districts in the country. To enable the roll out of SAGE, the Ugandan government agreed to provide 149 billion UGX (40.3 million USD), over five years,

while the development partners (DFID/UKAID and Irish Aid) committed to providing 67.8 million (~329.7 UGX). Consultations are currently ongoing within the government on how best the national rollout can practically occur. Yet, it has been suggested that this roll out is unlikely to occur due to bureaucratic issues and fiscal constraints (see: Hickey & Bukenya, 2016; Stewart et al., 2014).

As a result of poverty in old age, around 85% of seniors depend on subsistence agriculture for nourishment and economic survival (Stewart, Dall'Olio et al., 2014). While three quarters (72%) of the population depend on subsistence agriculture as their primary source of livelihood, intensified heat waves and sporadic rains due to the 2016 La Niña have increased household vulnerability to food insecurity, and have severely restricted food production, particularly in rural localities. (FAO, 2018; IPC, 2017). The Central Region currently has the highest rates of deteriorating dietary diversity and malnutrition in the country, with the elderly particularly vulnerable (IPC, 2017). Due to poor nutrition, older persons are already predisposed to emaciation, which makes the impacts of climate change particularly concerning (MOGLSD, 2012).

Equally, growing rural challenges are fueling a push for marketization, privatization and development in large urban centers (e.g. Kampala, Entebee). As a result, younger populations are progressively migrating in search of economic opportunities, but at the same time, fracturing traditional intergenerational family systems, leaving older populations more vulnerable to economic, political and health system exploitation (NPA, 2014; MoGLSD, 2012). Approximately 15 percent of the households in the country are headed by an elderly individual, while 2.5 percent of all households are elderly people who live on their own (MoGLSD, 2012). Moreover, over half of the elderly are responsible for raising orphans (HIV and otherwise) and vulnerable children (OVCs) (MoGLSD, 2012).

These changes are occurring at a time when the elders' physical and mental health is declining.

Elderly in the Central region have the highest rates of disability and are less likely to have good physical health compared to the elderly in other regions (Maniragaba et al., 2018; Ssewanyana, Kasirye, 2012). Despite this, they lack access to health services, geriatricians, and essential medications (Schatz et al., 2018b). The doctor to patient ratio is estimated at 1:24,725— 20 times higher than the WHO's recommendations— and only one hospital per 2.4 million people provides geriatric care (MOH, 2014). Even when older people do access a health facility/hospital, medication under Uganda's National Minimum Health Care Package does not include drugs that treat issues related to older persons (i.e. hypertension, stroke, diabetes, heart diseases, weak bones, arthritis, urinary incontinence) and communicable diseases (i.e. malaria, STDs, upper respiratory diseases) (MoGLSD, 2012).

In Uganda, gender plays a large role in access to and control of resources over the life course. In childhood, females are less likely to attain formal education and are more likely to drop out of school compared to their male counterparts (UBS, 2013). This affects literacy rates and has a cascading effect on both male's and female's ability to secure employment and finances in adulthood and old age (UBS, 2017). While both men and women are heavily engaged in agriculture, cultural norms surrounding agricultural production separate crop production along gendered lines; men take a lead role in cash crop production for commercial use and generally control subsequent proceeds, where women's crops are for subsistence use, destined for household consumption or small-scale local trade (Bergman et al., 2012).

Moreover, persistent patriarchal structures and deep-rooted attitudes regarding roles, responsibilities and identities of men and women mean that women are additionally responsible for maintaining the household and community by managing a larger share of domestic labour compared to men (UBOS, 2017). In marital relations, men act as the household heads, the primary financial provider and sole decision maker, whereas women are the keepers of the home, responsible for rearing children,

tending to crops and submitting to the control of their husband (Otiso, 2006). These experiences over the life course inform different aging realities for men and women. More women are widowed, face discriminatory traditional practices of property and land grabbing and are less likely to receive a pension in old age compared to men (Nyanzi, Emodu-Walakira, Sserwaniko, 2009).

To address the needs of the aging population, Uganda's government implemented a National Policy for Older Persons (2009), and a National Council for Older Persons Act (2013) that collectively aspire to create a "society where older people live in a secure and dignified environment that fulfills their needs and aspirations" (MoGLSD, 2012, p 6). Yet, it is unclear whether the country has taken adequate steps to provide coordinated programs and policies that cater to the needs of the elderly (MoGLSD, 2012) (see: Table 1.4 for specific objectives of the National Plan of Action for Older Persons). Thus, it is within this context of existing structural inequalities and changing environments that drivers of health and wellbeing are examined and implications for health and wellbeing explored**.**

Table 1.4 National Plan of Action for Older Persons Priority Areas

National Plan of Action for Older Persons	
Vision	A society where older persons are living in a secure and a dignified environment that fulfills their needs and aspirations.
Mission	To contribute to the empowerment of older persons to effectively participate in and benefit from development initiatives.
Values	Transparency and accountability.
Overall objective	To empower older persons with information, knowledge and skills to access services and participate in development programs for improved standard of living.
Priority areas:	
Economic Empowerment	Specific interventions that form savings, credit cooperative organizations, and financial institutions to better serve and train older persons in entrepreneurship, skill development skills and poverty reduction programs.
Social Security	Train older persons s in survivals skills, establish older persons committees, registration of older persons for old age grants, provide universal old age grants, advocate and lobby for expansion of SAGE, conduct pre-retirement training for older persons.
Food Security and Nutrition	Protect the land rights of older persons, lobby for the mainstreaming of nutrition needs for older persons. Promote nutritious feeding and good lifestyles among older persons and link them to agricultural services.
Health Care and lifestyle for Older Persons	Mainstream geriatrics and social gerontology in trainings for health workers, lobby for inclusion of older persons issues in health surveillance programmes and include drugs for old age diseases on essential drug lists and outreaches.
HIV and AIDS	Create awareness on HIV and AIDs among older persons, train older persons as peer educators, mainstream HIV and AIDs in all programmes targeting older persons, provide follow up and home-based care for older persons living with HIV and AIDs.
Psychosocial Support and	Develop guidelines on the provision of psychosocial support for older persons, train service providers in counselling for older persons, promote intergenerational activities; promote peer counselling groups among older persons.
Education, training and lifelong learning	Hold meetings with Functional Adult Literacy Coordinators to target older persons. Include issues of aging in formal and non-formal classes, train older persons on life skills.
Conflict and Emergencies	Establish appropriate response and emergency programmes, provide resettlement and re-integration services to older persons. Include the protection of older persons in conflicts and emergencies, promote involvement of older persons in conflicts resolution and management.
Water and Sanitation	Provide safe water, hygiene and sanitation among older persons.
Shelter	Provide appropriate shelter for older persons.
Gender	Promote gender equity and social inclusion for older men and women, legal services to older persons and sensitize them on their rights.

(Adapted from: MoGLSD, 2012.
See: http://www.mglsd.go.ug/policies/National%20Policy%20for%20Older%20Persons.pdf)

1.5 Dissertation Outline

This dissertation is organized as a collection of published manuscripts. Though all manuscripts together form a conceptual whole, the objectives and methods employed in each paper are unique. Chapter 2 of the thesis provides a detailed description of the research design and methods. Chapter 3 addresses the first research objective and provides a discussion on the links between different sociodemographic and structural determinants and subjective wellbeing. This manuscript is currently resubmitted to the *International Journal of Wellbeing* with the status accept with revisions. Chapter 4 addresses the second research objective and examines socio-cultural, environmental and political economic drivers of health and wellbeing, proposing different pathways through which health and wellbeing inequalities are constituted. This manuscript is currently under review in *Geoforum*. Chapter 5 examines how gender inequalities over the life course shape health and wellbeing in old age. This manuscript is currently under review in the *Annals of the American Association of Geographers.*

Together, Chapters 3, 4, and 5 consist of three manuscripts, under review in peer-reviewed journals and form the substantive chapters of the thesis. Chapter 6 summarizes the main findings across the three manuscripts and provides a discussion of the broader implications of population aging for health and wellbeing within the context of SSA. The chapter also highlights contributions of the research and concludes with directions for future research. Additional information (e.g. data collection tools) are included in the various appendices.

Chapter Two

Research Methods

2.1 Introduction

This thesis aims to explore the nexus between aging, health and place using approaches of political ecology, a life course perspective, and a social determinants of health framework. Accordingly, this thesis adopts an embedded mixed method research design using multiple qualitative methods (in-depth interviews with elders, focus group discussions with elders, key informant interviews) and a cross sectional survey. Since the thesis forms a conceptual whole, this chapter outlines the details and justification for the research design, methods and techniques. The chapter also provides a detailed account of the data collection process. While some of these details are included in the main manuscripts, this chapter provides an integrated and consolidated methodology for the entire research as journal word limitations prevented the adequate elaboration of the methods in the manuscripts.

2.2 Approaches to Research in Health Geography

Since the 1970's, the role of theory in health research has increasingly been recognized (Dear 1978; Meade, 1977; Kearns, 1993; Litva & Eyles, 1995; Krieger, 2011; Meyer & Ward, 2014). Three main reasons explain why researchers should explicitly emphasize theory (see: Krieger, 2011; Meyer & Ward, 2014; Aboud, 2012). First, explicit engagement with theory enables health researchers to pose well conceived questions, generate comprehensive answers, and provide a backbone to reinforce quality in research design and analysis (Meyer & Ward, 2014; Krieger, 2011). Second, theoretical engagement provides a way to explain (and/or predict) phenomena and processes that occur in the world, "specifying how and why the variables and statements are interrelated" (Cresswell, 2011; Labovitz & Hagedorn,

1971, p17). Third, explicit engagement with theory identifies knowledge lacunas, helps judge strengths and weaknesses of current theory and ultimately enhances knowledge (Kreiger, 2011; Harper & Laws 1995).

It is also important for researchers to recognize how their use of theories is informed by larger paradigms (Guba & Lincoln 1994: Morgan, 2007). Paradigms are important since they provide a set of assumptions that structure the approaches to research; the underpinning ontology and epistemology of research, and the ways knowledge is created and derived from data (Cresswell, 2007; Crotty, 1998). Within health geography, diverse paradigms spanning from realism (commonly associated with positivism) to relativism (commonly associated with constructivism, interpretivism, and humanism), inform the broader questions of how to identify, classify and enhance the determinants of health and wellbeing (Gatrell & Elliott, 2014).

While these perspectives differ in their assumptions, beliefs and values regarding reality (Gatrell et. al., 2014), they all guide researchers in fundamental ways by shaping both the questions asked about the health and wellbeing of individuals and populations, and the methods used to generate answers (Guba & Lincoln, 1994). For instance, within a relativist (constructivist) paradigm, scholars explore how a variety of factors (e.g. personal agency, socio-economic systems, built environments) shape perceptions and experiences of health and place, whereas realists describe and explain the distributions, patterns and trends, at both the macro and micro level, related to a variety of health outcomes. Overall these paradigmatic approaches have created an epistemologically diverse field that explores health and place through a variety of theoretical facets— positivism, structuralism, structuration (Gatrell et al., 2014).

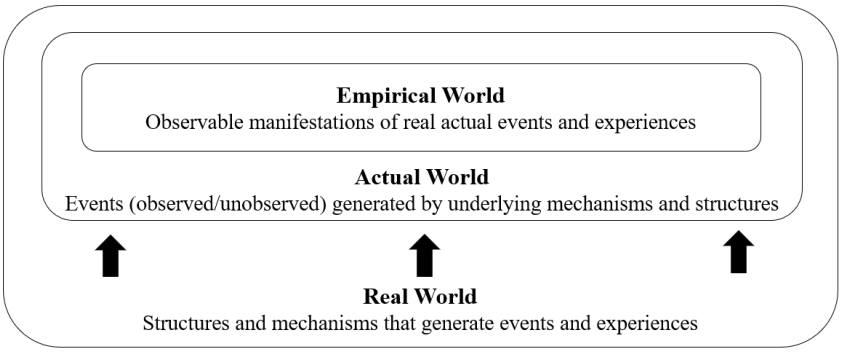
2.3 Research Design

This research employs an embedded convergent parallel mixed method study design (integrating both quantitative and qualitative data) and is framed by critical realism. Contrary to views espoused by positivism (i.e. an objective reality exists in a closed system; concerned with regularities, regression-based variables and models; quest for law like forms) and relativism (i.e. no universal reality; reality is socially constructed; concerned with interpretation, hermeneutics and description), critical realism puts forth a different understanding of reality altogether (Pawson & Tilley, 1997; Julnes et al., 1998; Bhaskar, 1975).

Critical realism is underpinned by a realist ontology— the assertion that reality exists and operates independent of one's thoughts (Bhaskar, 1975; 1989; Liscomb, 2008). Historically, fields working within the social sciences have focused heavily on questions of epistemology, grounded in empirical investigations. While undeniably important, this focus has often been at the expense of ontology— that is, the dominant focus of much social science work has coalesced around queries of how we know what we know, while questions about the nature of the known is often treated as an afterthought (Archer, 2015; Sayer, 2000; Porpora, 2015). This has resulted in a focus on methods and forms of explanation, without a thorough consideration of the kinds of entities that actually exist in the natural (physical and biological) and social (sociological and cultural) world, or the nature of their composition (Archer, 2015; Sayer, 2000; Porpora, 2015). That said however, even if ontological issues are rarely examined, social scientists do rely on certain beliefs about the nature of the social and natural world (e.g. certain convictions about structures and actors; processes between and within phenomena, etc.). These beliefs in turn inform the questions scholars ask, and the types of investigations scholars conduct (Archer, 2015; Sayer, 2000; Porpora, 2015).

While beliefs about the nature of reality may not always be observable, quantifiable or reducible to empirical data, critical realists suggest that one's notion of reality does produce observable phenomena (events, occurrences, etc.) that can be understood if the structures of reality that generate a phenomena are examined (Bhaskar, 1975; 1989; Sayer, 2000; Williams et al., 2017; Archer, 2015). To do this, critical realism purports "that the natural (physical and biological) and social (sociological) reality should be understood as an open stratified system of objects with causal powers [making things happen]" (Morton, 2006). This reality consists of three strata: the real, the actual and the empirical (see: Figure 2.3 (A)) (Bhaskar, 1975; 1989). The *real* is often unobservable and includes the mechanisms and structures that generate or produce an observable phenomena. The *actual* includes events or occurrences, whether experienced or not, that are generated by mechanisms and processes, while the empirical includes the phenomena that can be both observed and experienced (Williams et al., 2017; Bhaskar, 1975; 1989). This means that while the *real* reality cannot be fully known, scholars can study empirical phenomena by investigating the generative processes, structures and mechanisms that created the phenomena in the first place (Williams et al., 2017; Bhaskar, 1975; 1989). That is, critical realists study how the 'patterning of social activities are brought about by the underlying mechanisms constituted by people's reasoning and the resources they are able to summon in a particular context' (Pawson & Tilly, 1997; pg. 220).

Figure 2.3 (A) Critical Realism Layers of Reality



To do this, critical realists suggest that scholars should identify the hypothetical mechanisms that, if they were to exist, would account for the production of the phenomena in question (Bhaskar, 1975; 1989). Then, scholars should empirically study the hypothetical mechanisms, structures and processes in order to develop different explanations of that phenomena. Lastly, critical realists suggest the real reality of a phenomena can be reconstructed through abductive inferences; arguments that move from a social phenomena to a theory which is able to account for that phenomena (Bhaskar, 1975; 1989; Porpora, 2015; Sayer, 2000).

To investigate the autonomous existence of reality, critical realists recognize that one's knowledge about reality is always historically, socially and culturally situated. Knowledge is articulated from various standpoints (depending on influences and interests) and is transformed by human activity (Sayer, 2000; Archer, 2015). As such, critical realists realize that knowledge is context, concept and activity dependent. This means that while an independent reality does exist, our understandings of that reality are confined to the here and now, filtered through individual perceptions and social constructions, and situated within a particular social and historical context (Wainwright, 1997; Strickley, 2005; Liscomb, 2008; Bhaskar, 1989).

Hence, critical realism puts forth a realist ontology with a relativist epistemology. Since there is no way of knowing the world outside of historical time, all of our representations, accounts and particular perspectives have limitations (Bhaskar, 1975; 1989; Sayer, 2000; Porpora, 2015). Critical realists appreciate that any science is fallible, and scientific knowledge is always formulated in terms of conceptual frameworks which are themselves situated in a particular time and space (i.e. context dependent). This does not imply that knowledge is hopeless or realism a futile quest. Rather, it means that our representations of the world are always historically dependent, perspectival, and fallible, necessitating a degree of methodological pluralism to ascertain a more accurate description of a reality (Bhaskar, 1978; 1989; Archer, 2015).

Situating myself within critical realism allowed me to focus on the interplay between agency (individual determinants of how people act) and structure (the circumstances which influence agency to 'understand the interdependence of individuals and society' [Wainwright, 1997]) and strive to distinguish between a phenomenon and the structure which caused it. Rather than couching this research within a realist paradigm, critiqued for its conviction that only the observable can be associated with reality (Spencer, 1995), or a relativist paradigm, critiqued for its lack of depth in understanding 'constraining and enabling social structures and mechanisms' (Wainwright, 1997; 1268), situating myself within critical realism enabled me to understand how enquiry occurs within a complex open system, comprised of different systems (e.g. social, psychological, biophysical) that are both dynamic, ongoing, and permeable (Wilson & McCormack, 2006; Westhrop et al., 2011). Moreover, it allowed me to not just acknowledge that differences in experiences and determinants of health and wellbeing vary over time and space, but also explain why these differences may exist through the comprehensive and coherent use of mixed methods (Braun & Clarke, 2006).

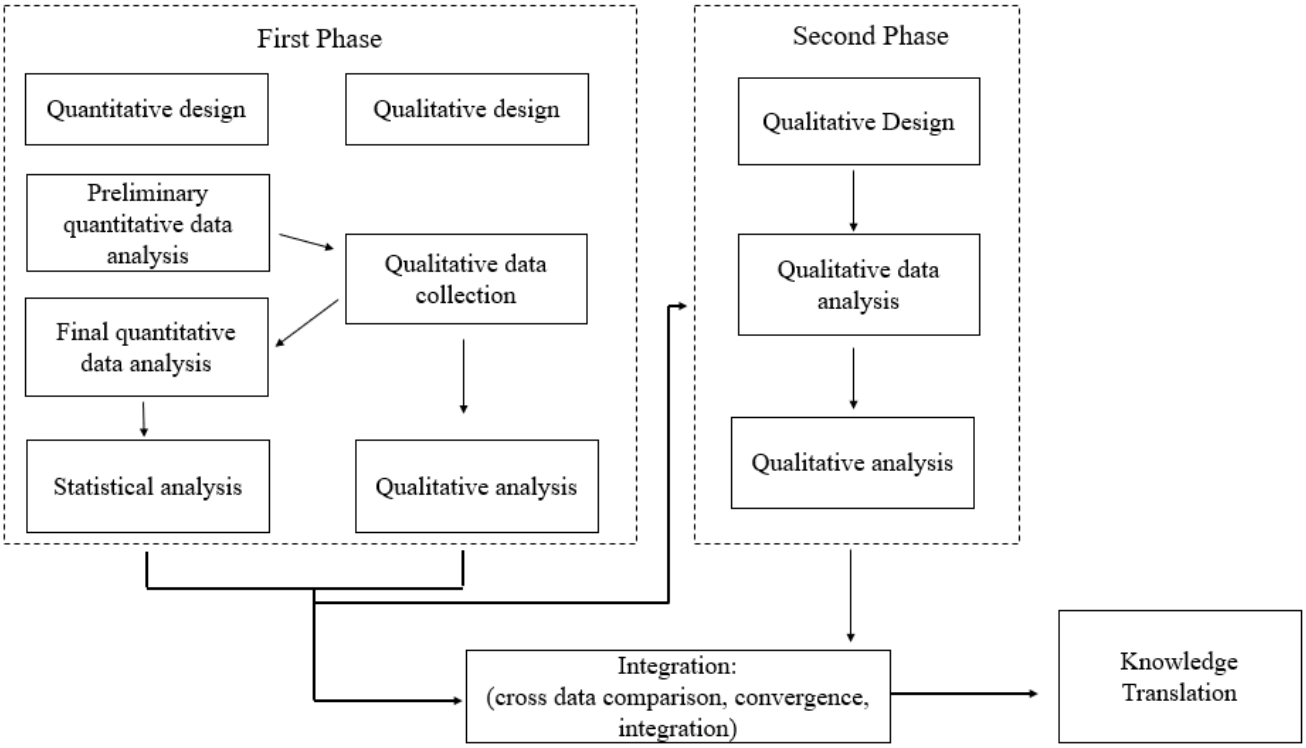
A mixed methods design was appropriate for this research for two reasons: i) the complexity of the topic being researched and ii) the ability to produce research findings amendable to policy and practice (see: Curry & Nunex-Smith, 2015). Using a mixed method approach fostered a greater understanding of the contextual and environmental factors influencing behaviours, health, policies and programs (including facilitators and barriers) (see: Brown, Elliott, Leatherdale, & Robertson-Wilson, 2015; Creswell et al., 2011; Zhang &Watanabe-Galloway, 2013), and provided the capacity to compare and triangulate findings, provide context for quantitative results, consider multiple perspectives and socio-ecological levels, and examine both processes and outcomes (Ivankova & Kawamura, 2010).

An embedded convergent parallel design was used in this study to examine the multiscale and multitemporal determinants of health and wellbeing. This design was chosen because each method addressed a separate research objective within a broad research goal, enabling the exploration of different components of health and wellbeing within a multi-theoretical approach (Morse, 1991). It allowed the qualitative and quantitative data to be collected and analyzed during a similar timeframe (Cresswell et al., 2011). In this research, both secondary quantitative survey data and qualitative (in-depth interview, focus group, key informant interview) data are used in combination to address the research questions. The premise of this design is that by triangulating the methods via comparing and contrasting quantitative and qualitative results, researchers are able to corroborate and validate research findings to develop a more complete understanding of the phenomena (Creswell et al., 2007).

Within the convergent parallel design, an *interactive approach* was taken, where data collection and analysis from the quantitative phase informed data collection and analysis in the first qualitative phase. For example, prior to the qualitative data collection, I conducted a preliminary analysis of the quantitative data where descriptive and bivariate analysis was employed. This illuminated population

means (e.g. average demographic, household, social characteristics) and highlighted the relative contribution socio-demographic factors affecting health and wellbeing among men and women. This preliminary analysis helped inform some of the questions in the qualitative phase (e.g. the effect and impact of child rearing on health and wellbeing, along with gender differences in the aging process). At the same time, the qualitative data collection process also helped to identify new domains (e.g. housing structures, access to basic resources) for incorporation in the final quantitative analysis. Following qualitative data collection, I then analyzed both qualitative and quantitative data separately. Interaction occurred again when findings from the quantitative phase and first qualitative phase influenced data collection in the second qualitative research phase (e.g. the inclusion of additional geographical locations and personal characteristics). Figure 2.3 (B) below provides a general framework and flow of activities for the data collection and analysis. The rest of this section details the data collection and analysis procedures employed.

Figure 2.3 (B) Framework and Flow of Activities for the Data Collection and Analysis



2.3.1 Case Studies and Mixed Methods

A mixed method case study was most appropriate for this research as it provided an opportunity to employ both an extensive (breadth) and intensive (depth) research approach. Case studies have often been described as "empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially where the boundaries between phenomenon and context are not evident" (Yin, 2009:18). This research specifically employs an exploratory single case study with embedded units. Given the dearth of knowledge on aging in SSA, an exploratory case study was chosen as it provides the opportunity to investigate a distinct phenomenon (e.g. aging, health and wellbeing) currently characterized by a lack of detailed research (see: Aboderin et al., 2015; Yin, 2009). Using a case study

with multiple embedded units enabled the consideration of how various environments (e.g. social, cultural, physical, political) inform health and wellbeing, why health inequalities exist, and explore how these factors vary by sub-populations [e.g. men, women, 'young' old (50-70 years), 'old' old (70+)] (within case analysis), or across all of the sub-units (cross- case analysis) (Yin, 2009). The capacity to engage in such rich analysis serves to better illuminate the case.

Although case studies have largely been identified with intensive research, employing a broad range of techniques (both quantitative and qualitative) is recommended to generate strong evidence for any case (Yin, 2009). Mixed methods research designs in case studies focus on the complementary roles the different methods can play rather than their limitations and differences (Sayer, 1992). Thus, instead of emphasising difference between "quantitative and qualitative," "objectivity and subjectivity, "truth and perspective," "generalisations and extrapolations" (Patton, 2015), mixed methods emphasise the complementarity and reveal the benefits of using different aspects of empirical reality. On one hand, qualitative aspects are concerned with how processes and experiences occur within the case in order to transfer learnings to similar contextual settings (Warshawsky, 2014). On the other hand, quantitative techniques seek to determine general patterns, possible associations and common properties among the general population – in order to make generalisations based on observable data (Sayer, 1992; Gatrell & Elliott, 2014). For example, to find links between social and structural determinants and subjective wellbeing and its variation by gender, survey data were analyzed using structural equation modelling and mediation analysis. While this provided useful information on the general links between social and structural determinants and subjective wellbeing, it failed to capture the depth of meaning, everyday practices and lived experiences surrounding aging, health and wellbeing. Qualitative approaches were

thus used to explore meanings and lived experiences that were unable to emerge through quantitative analysis.

Using a mixed method case study allowed me to acquire "partial and situated knowledges" in situ (Haraway, 1988). By using mixed methods, I was able to draw on different vantage points and technique to "produce different views of particular processes and events" to address my research objectives (Nightingale, 2003, pg. 80). The use of a mixed method case study allowed me to address my research questions using different methods to complement each other. Thus, I allowed the questions to determine the methods (Elliott, 1999).

2.3.2 Research Techniques

The quantitative component of this research employed a secondary data analysis of the World Health Organization 2013 Uganda Study on Global Aging and Health (SAGE) Wellbeing of Older People Study. The Uganda -SAGE Wellbeing of Older People Study is a sub-study conducted in partnership with the Ugandan Medical Research Council/ Uganda Virus Research Institute (MRC/ UVRI) and the Africa Centre Demographic Surveillance System in South Africa. The Uganda-SAGE Wellbeing of Oder People Study is the only cross-sectional survey that specifically targets older persons in the Ugandan context.

In health research, cross-sectional surveys are carried out at a point in time to take a snapshot of exposures and outcomes in a population. They are usually conducted to estimate the prevalence of the outcome of interest or to determine association between the exposure and certain outcomes of interest in a population (Levin, 2006). Thus, data on the exposure and outcomes are collected concurrently over a relatively short period. In this research, associations between the exposures (i.e. social and structural determinants) and outcome of interest (i.e. subjective wellbeing) were examined. Since cross sectional studies are conducted at a point in time, it is often difficult to infer causality or temporality from the

findings. For example, in this research it was not possible to determine whether the outcome (i.e. subjective wellbeing) occurred before or after the exposure (i.e. social and structural determinants). However, employing a cross-sectional survey was very important for determining possible pathways linking inequalities and wellbeing as well as generating questions and hypothesis for future research. Further, it was possible to include many exposure variables and confounding variables in the models, which created an opportunity to assess multiple pathways.

The quantitative sample consisted of people aged 50 years and above and were selected from existing Medical Research Council/ Uganda Virus Research Institute (MRC/ UVRI) databases in rural Masaka and urban Wakiso Districts of southern Uganda. Five groups were surveyed in the 2013 Uganda Study on Global Aging and Health, each with 100 participants. The groups were as follows:

1. Have an adult child who died of HIV/AIDS;
2. Have an adult child who is living with HIV and on antiretroviral therapy (ART);
3. Have no child with HIV/AIDS and are not infected with HIV (comparison group);
4. Is HIV infected and on ART for at least one year;
5. Is HIV infected and not on ART.

These groups were chosen by the study by the Ugandan MRC/UVRI and South African Centre Demographic Surveillance System in order to provide data on the effects of HIV/AIDS among older people infected or affected by HIV in Uganda and South Africa. The aim of this study was to describe the health status, wellbeing and functional status among older people either infected with HIV themselves or affected by HIV/AIDS in their families. The impacts of caregiving and ART were also examined.

The respondents for group 1, 2, and 3, were randomly selected from the General Population cohort database of MRC/UVRI. For groups 4 and 5, all available qualifying and consenting older people from the General Population Cohort were recruited and an additional 67 respondents were randomly selected from the clinical databases of TASO and two other HIV care providers in the district. The study

respondents for group 1 and 2 were recruited from the families of the Entebbe HIV cohort participants. The respondents for group 3 were selected from support groups (e.g. nutrition, therapeutic, counselling) associated with the outpatient clinic of Entebbe Hospital and were older people unrelated to HIV/AIDS. The respondents for groups 4 and 5 were randomly selected from the MCR/UVRO cohort and the HIV/AIDS clinic run by TASO in Entebbe. In total 510 people were interviewed in the quantitative component: 322 in the rural area and 188 in the urban area, 61 percent women and 39 percent men. The mean age overall was 65 years, but for the HIV-positive groups (4 and 5) the mean age was 59. Thirty five percent of the participants were in the age group 50-59 years, while 11 percent were 80 and older. The response rate was 99% with very few refusals.

The structured questionnaire was derived from existing instrument of the WHO multi-country Study on Global Aging, ensuring the alignment of the instrument with international standards. The interviews were done in two visits. During the first visit, part 1 of the questionnaire was administered. This consisted of a household roster with questions covering economic status and socio-demographic characteristics (age, sex, education, marital status, religion, work and living conditions, family support networks and financial transfers). It also included a detailed assessment of health status (e.g. self-ratings of health in numerous domains including mobility and self care, activities of daily living and instrumental activities of daily living (functional assessment)), chronic diseases and their treatment, nutrition, and risk factors (i.e. alcohol and tobacco use). Respondents were also asked about their quality of life, social networks and experiences with the health care system.

Due to the length of the interview guide, Part 2 of the structured interview occurred the day after the first interview and consisted of the caregiving questionnaire. This questionnaire identified the respondent's roles and responsibilities of care, their experiences of caregiving to adults and children, and

the nature of care and support they provided (including personal care as well as physical and financial assistance). Questions also address the difficulty they had providing care and support, whether they were the main or secondary provider, and the support the older person may have received and the nature of their relationships with the care providers. Respondents were also asked about the difficulty of obtaining this care and support, along with their satisfaction with the care and support received. All the modules used in the questionnaires were translated into Luganda (the main local language) and tested during the pilot study. Eight field staff were trained on interview implementation or procedures between February and May 2013 prior to questionnaire implementation.

The qualitative component employed in-depth interviews (IDIs), focus group (FG) discussions, and key informant (KI) interviews. These methods were employed concurrently throughout the data collection process. IDIs were conducted with elderly individuals (50 years+) to develop a rich description of life histories and experiences in order to investigate the connections between an individual's health and wellbeing and their historical and socioeconomic context (Vanhoutte & Nazroo, 2016). Doing so promoted a comprehensive understanding of the multiple determinants of health and wellbeing over the life course and helped to establish why people construct aging, health and wellbeing in particular ways (Seidman, 2013). Engaging elderly individuals in IDIs was tremendously beneficial as it provided the opportunity to tease out a greater depth of meaning surrounding health and wellbeing, explore nuanced life course histories and experiences, and uncover varied opinions of aging (Robertson, Hale, 2011)—all of which enhanced research findings.

FGs were simultaneously conducted within the qualitative research phase. FGs differ from IDIs given that multiple research participants are interviewed in a group setting and engage in collective dialogue (Hesse-Biber, 2003). Since the elderly are marginalized in Uganda's political economic context

(see: MoGLS, 2012), FGs offered a unique advantage for engaging this population. FGs provided the opportunity for individuals to freely discuss their daily challenges and experiences in a supportive and collaborative environment (Kitzinger, 2005). The safety in numbers enabled elders to support and encourage each other in explaining stigmatizing and damaging experiences. This in turn helped shift discussion from self-blame to the exploration of structural and systemic factors impeding health and wellbeing (Kitzinger, 2005). Moreover, this group dynamic allowed participants to explore both their own experiences and that of others. This fostered greater insight into their specific challenges (e.g. reasons for neglect/health problems) and allowed groups to think together to develop potential solutions (e.g. implement pensions, provide close accessible water) (Hesse-Biber & Leavy, 2011).

KI interviews were also employed within the qualitative research phase. For the purpose of this research, a KI was defined as an individual who was directly affiliated with Uganda's government, health or education system, was knowledgeable about aging and health issues, and/or was in direct contact with the aging population in the region (see: Table 2.3.2). Hence, they provided a thorough understanding and discussion regarding factors facilitating and impeding the health and wellbeing of aging populations (Lytle, Ward, Nader, Pedersen, Willston, 2003). The use of KI interviews provided insight surrounding policy discourses on the formation of health and social services for the elderly, while also eliciting specialized (top-down) knowledge on how Uganda's policy for the elderly is perceived to be stating its achieved goals. These individuals were thus able to provide insight regarding certain aspects of aging and policy development unable to be obtained from other forms of data collections.

Table 2.3.2 Key Informants Participant Characteristics

Key Informants	**Department/Organization**
Institution	**Department/Informant**
Federal Government	- Focal Person for the Ministry of Gender, Labour and Social Development - Dept. Elderly and Disability - Focal Person for the Department of Disability and Rehabilitation Ministry of Health - Chair of the National Council for Older Persons - Vice Chair of the National Council for Older Persons
District/Sub-County Government	- Local Council 5 Members
Village/Parish Government	- Town council members - Community development officers
Health Services	- Community Health Workers – Nurses in Public and Private Health Centers and Hospitals – Doctors in Public Hospitals
Non-Governmental Organizations (NGOs)	– ROTOM (Executive Director, Country Administrator, Field Staff, Volunteer Staff, Doctor, Nurse) – Help Age International (Manager) – Uganda Reach the Aged Association (URA) (Executive Director) – Providence House (Executive Director)

2.3.3 An Integrated Knowledge Translation Approach to Research

Since the needs of elderly Ugandans must be addressed in the context of continuing high rates of maternal mortality and infectious disease, it is crucial that investments in health are evidence informed and translated into actionable outcomes (Ellen, Panisset, Araujo, et al., 2017). While knowledge translation tools for health are well developed, their application, along with their use for disseminating new knowledge in the field of aging and health is negligible, especially in the SSA context (Van Eerd, Newman, DeForge et al., 2016; Ellen et al., 2017). Considering research evidence is more likely to have an impact when there is partnership between researchers and those contending with the real-world needs

and constraints, approaches that foster knowledge exchange between researchers and knowledge users (i.e. individuals and organizations who occupy a range of positions in health systems, funding, policy, NGOs affiliated with the elderly) will help ensure that research findings are amendable to policy and practice (Jull, Giles & Graham, 2017; Bowen & Graham, 2013). Moreover, since knowledge users are more likely to apply research results when there is a greater linkage and exchange between themselves and researchers (Jull, Giles & Graham, 2017; Bowen & Graham, 2013), addressing the kinds of questions that knowledge users find interesting will help ensure research results, especially in the context of aging and health, are more amendable to policy and practice (see: Ellen et al., 2017).

To begin addressing this knowledge to action gap in the aging and health field (see: Bowen & Graham, 2013), this research embedded an integrated knowledge translation (iKT) approach in the research process. iKT offers a strategy for bringing diverse perspectives together to understand and respond to problems through processes of knowledge generation and refinement (Graham et al., 2006; Kothari, Wathen, 2017). Inherently relational (Bowen, Botting, Graham, 2016), iKT involves participatory, inclusive processes where people who 'use' research work alongside people who 'do' research (Bowen & Graham, 2013). In so doing, iKT brings those who 'use' the research into a process of problem solving through research (Gibbons, 1994), emphasizing knowledge co-production and partnership (Kothari & Wathen 2017).

Integrated knowledge translation and its guiding Knowledge to Action Framework ('the KTA Framework') [Graham, et al., 2006] are promulgated as ways to deliver improved health care interventions that will, in turn, positively affect the health of populations. iKT is an iterative process for improving health care practice and associated outcomes by promoting the use of research results in

decision making (see: Figure 2.6). The definition of iKT derived by the Canadian Institutes of Health Research (CIHR), and subsequently adopted by the World Health Organization, states iKT is:

> [A] dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system. This process takes place within a complex system of interactions between researchers and knowledge users which may vary in intensity, complexity and level of engagement depending on the nature of the research and the findings as well as the needs of the particular knowledge user. [CIHR, 2014, pg. 1]

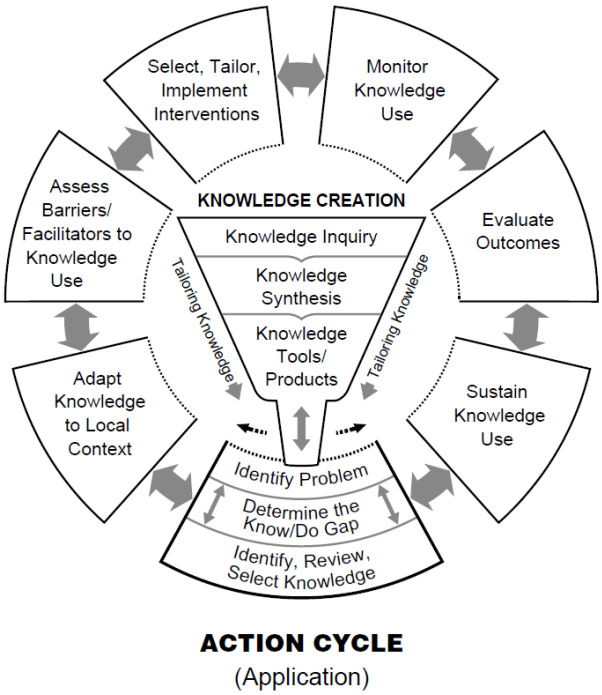


Figure 2.6 Knowledge to Action Cycle.
(Reproduced with permission from: Straus SE, Tetroe J, Graham I. Knowledge translation in health care: moving from evidence to practice.
2nd ed. BMJ Books; 2013. Available: http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1118413547.html).

This action cycle, commonly referred to as integrated knowledge translation (iKT), aims to facilitate continuous interaction among researchers and knowledge users (e.g. research partners, community members). Hence, using an integrated knowledge translation approach in this research provided an opportunity to ensure research questions and findings were of relevance to knowledge users and knowledge holders (i.e. the elderly), as well as give explicit consideration to the translation of research evidence to knowledge users and knowledge holders (Graham, et al., 2006; Cacari-Stone et al., 2014).

In this research, Reach One Touch One Ministries (ROTOM) were the primary knowledge user and research partner involved in this research process. ROTOM was established in 2002 and is one of the only non-government organizations (NGO) that provides care and social services for older populations in Uganda. Although ROTOM only operates in the Mukono District of Central Region (See: Appendix F for ROTOM's inclusion criteria), it is widely connected to other NGOs, health practitioners, educators, and government representatives at the district, municipal, and national level. ROTOM provides regular home visits to elderly individuals, free medical screening and treatment; access to safe, secure and healthier housing; improved self-sustaining income and food security; grandchild support; and workshops to improve life skills. As such, the ROTOM staff have an extensive and thorough knowledge base regarding elders' daily challenges, concerns, and needs, as well as diverse insight surrounding the social determinants underpinning elders' health and wellbeing.

While ROTOM was the primary knowledge user involved in the research process, many other knowledge users (e.g. health providers, government officials, NGOs, etc.) were also key participants in the final knowledge translation phase of this research (discussed in the following sections). Similarly, knowledge holders (e.g. the elderly) were the central focus of this research but were not involved in the

development of research questions. The following section will discuss how the iKT process unfolded throughout the research process.

2.3.4.1 Pre-data collection

Throughout the research process, I drew on aspects of the Canadian Coalition of Global Health Researchers Partnership Assessment tool (see: CCGHR, 2009) to help me think through the research partnership from the inception of research, implementation, and dissemination. I must first highlight that this partnership was only possible due to my supervisor, Dr. Elliott, and her pre-existing and well-established relationship with ROTOM. Prior to the implementation of this research, Dr. Elliott and the Executive Director (ED) of ROTOM were often in communication. During these interactions, the ED of ROTOM became aware that I was completing my PhD in the area of aging and health, became very interested in my research, and invited me to come and conduct research with their organization. I was and still am very grateful that I was given this opportunity to use their expertise in my research in order to address health inequalities among the elderly in Uganda. Only with their expertise was I able to produce knowledge that would benefit both their organization and lead to broader discussions of aging and health inequalities in Uganda with a variety of key knowledge users (i.e. academics, researchers, government officials, etc.). I would like to underscore that it was not my intention to 'help' or 'fix' the problems ROTOM and seniors encountered, but rather to work with them to acquire the information needed to affect positive change.

Prior to starting fieldwork, I met with our local partners (ROTOM's Country Director and Founder/Executive Director) three times in Canada and twice in Uganda. The first informal meeting in Canada (2015) provided the opportunity to establish a personal connection with the Executive Director (ED) of ROTOM and learn extensively about their organization's objectives and missions. The ED also

inquired about my research interests and experience conducting research in order to get a better understanding of my background. This co-learning experience enhanced my capacity as a researcher as I was able to understand some of ROTOM's daily realities working with elders in communities and develop my appreciation for the skills and services of the organization. Through these conversations we began to develop a collegial relationship where we could talk freely about our research goals and interests which helped to lay a strong foundation of trust for future research interactions.

The second meeting occurred in Uganda during my reconnaissance trip (Summer 2016) and provided me with the opportunity to learn how the organization functioned on the ground. During this reconnaissance trip, I was able to establish connections with the majority of ROTOM's staff and learn how their services and projects were implemented in the surrounding areas. ROTOM staff also shared with me the many challenges they identified that were confronted by elderly individuals in the communities of the Central Region (i.e. access to water, food, shelter, social connections, economic insecurity, political neglect). These discussions with ROTOM staff helped solidify the fact that addressing the health inequalities of elders in the Central Region was of paramount concern for the community. Moreover, ROTOM staff also provided opportunity for me to visit elders in their communities so I could begin to appreciate the experiences and challenges they face on a daily basis and start thinking about questions related to the root causes of health inequalities (see: CCGHR, 2015).

This trip also provided the opportunity to establish connections with an individual who would act as my primary research assistant during the data collection process. This was highly beneficial as we were able to start discussing logistics of field work and the geographic extent to which data could be collected. Similarly, I was able to establish connections with numerous key informants who worked in a variety of societal sectors (e.g. NGO's, health workers, government officials, educators). Creating these

relationships with key informants prior to data collection was very helpful because when I returned for data collection, we already had a connection and they were more willing to participate in this research.

Once I returned to Canada, I began developing my overarching research plan and was in ongoing communication with ROTOM (via email) regarding the research design and vision of our partnership. These discussions helped to tease out both my motivation (i.e. uncover and challenge larger oppressive structures producing health inequalities) and their motivations (i.e. acquire information that would benefit their organization and other elderly in the region) for becoming involved in the research and intentions for the partnership. Prior to our third communication which occurred over Skype, I sent both ROTOM's Country Director and ED an overview of the research plan and general research objectives (guided by the literature and our prior discussions). We then communicated though Skype to discuss the general research plan and seek their feedback and further questions they would like addressed when conducting the research. This process was very fruitful as they identified further areas they wanted addressed in the research. This process lead to the co-construction of research questions about aging and health broadly (e.g. what are the main social and ecological drivers of health? How do elderly individual perceive the aging process?) and particular research areas regarding the impact of their organization they wanted addressed (e.g. how do ROTOM seniors compare to non-ROTOM seniors? What are the social and economic impacts of ROTOM support?). This discussion also provided the opportunity to discuss the degree of participation expected and desired from ROTOM members. Moreover, ROTOM helped to identify diverse stakeholder groups for inclusion in the research process. Proactively and intentionally providing this opportunity for ROTOM to be involved in the inception of the research enhanced our partnership and the implementation of research (see: CCGHR, 2009)

Once I arrived in Uganda in September 2017 for my field season, I met again with both the Country Director and the Founder and ED of ROTOM to go over our research aims and objectives, address any concerns and answer any questions they had about the research process. I was also able to ask any further questions regarding access to certain communities and transportation concerns. Communicating with each other about specific questions or concerns prior to commencing the research enhanced trust in our partnership and ensured that the research would create shared benefits. In the first two weeks of my arrival, I also trained my research assistants (RAs) in the formalities of interviews and focus groups. One RA was a male Ugandan educator at the Ugandan Christian University (UCU) who holds a Master's in Public Health. The second RA was a female Community Development Officer who holds a Master's in Public Policy and Administration. Both RA's were fluent in English, Lugandan and Swahili.

Training was conducted at the ROTOM facilities over the course of two days. During the course of training we would dissect the meaning behind the interview questions and discuss how to translate the questions into the local dialects to ensure quality and consistency in translation. During this time, the RAs raised potential questions and gave feedback on the interview guide. This training not only allowed the RAs to become familiar with the interview guides but also provided the opportunity for the RAs and I to become comfortable working with each other to build rapport. Moreover, the RAs and I would play-act the interview process, learning how to build rapport with participants, and become fluid in their questioning. Play-acting also included acting out certain ethical dilemmas and a discussion as to how to appropriately deal with these situations. The RAs also signed confidentiality agreements. This ensured that the RAs would adhere to the University of Waterloo's research ethics guidelines.

Before data collection began, myself, my research assistants, and a ROTOM staff member met with village elders in each community to introduce the research and formally ask permission to conduct research in their communities. In some instances, elders scheduled meetings where they would come and share their thoughts, ideas and opinions around issues they thought were important and required attention. These informal meetings also provided the opportunity to discuss the general purpose and objectives of the research with elders in the community. Many elders demonstrated interest in the study during our initial meetings and some immediately gave an indication of their work schedules to enable us to schedule a meeting at a later date. Many elders were also willing to share the research aims and objectives with their colleagues in the community who were unable to attend information sessions due to immobility, childcare responsibilities, or sickness.

Individuals willing to participate in interviews and focus group discussions were provided with a thorough description of the research objectives and given the opportunity to ask any questions related to the research process. My research assistants and I also highlighted potential risks and benefits of engaging in this research and discussed privacy and anonymity. Since most of the participants were illiterate, verbal consent was obtained before the interview/focus group began. All participants were made aware of their right to decline to answer any question and were free to stop the interaction at any time if they requested.

2.3.4.2 Data Collection Phase 1

Data collection occurred between September 27th, 2017 to January 3rd, 2018. In depth interviews were conducted to understand how aging, health and wellbeing were constructed, along with how life course experiences shaped the aging process (see: Appendix A). The interview guide was informed by constructs of political ecology and the life course. Eligible participants were individuals between the ages

of 50-70 years and 70+ years. A total of 40 participants from the 4 districts were selected through purposeful maximum variation sampling to participate in in-depth interviews. Purposeful sampling ensured maximum variation across demographic characteristics [e.g. religion, age (young old: 50-70 years, 'old' old: 70+), gender], socioeconomic status, employment histories, family composition and geographical districts. All in-depth interviews were conducted in rural locations, lasted between 1-2 hours and were conducted either in the elder's home or in a quiet location outdoors (see: Table 3.4.2 for details). To ensure participants responses were properly captured, my research assistants and I would repeat their comments and ask for clarification where needed in order to enhance narrative accuracy and ensure interpretive validity (Lincoln & Guba, 1985).

Focus group discussions were conducted to understand how various environmental domains (e.g. social, cultural, political, economic, housing, biophysical) shaped health. The focus group guide was informed by the multilevel constructs of political ecology and helped to probe the reciprocal relationship between health and the environment. (see: Appendix B). A total of 10 focus group discussions with a purposefully selected sample of 10 individuals per group were conducted across the four districts in the Greater Mukono area. The purposeful sampling ensured maximum variation across demographic characteristics [e.g. religion, age (young old: 50-70 years, 'old' old: 70+), gender], socioeconomic status, employment histories, family composition and geographical districts. All focus groups were conducted with participants in the same age bracket and gender (see: Table 3.4.2 for details). This helped facilitate a greater level of comfort when discussing potentially sensitive topics. All focus groups were conducted in rural communities and occurred either outdoors in a quiet location or within a participant's house. These discussions lasted between 1-1.5 hours. To ensure focus group responses were accurately captured, my research assistants and I would ask responses to be repeated or clarified. If respondents were speaking

over each other, we would stop asking new questions until all participants had a chance to speak. Upon completing the focus groups, my research assistants and I would also engage in a post-session debriefing, where we would discuss the issues raised in the discussion and address any words or phrases in need of clarification due to language barriers. Engaging in these procedures helped ensure narrative accuracy and interpretive validity (Lincoln & Guba, 1985).

Key informant interviews were conducted to understand policy discourses and structural impediments to elderly health and wellbeing (see: Appendix C 1-4). Key informants were contacted either in person or through the phone by myself and the research assistant. Participants were provided with the information letters that outlined the research objectives, potential risks and benefits, privacy and confidentiality issues, as well as key contacts for the research project. All questions and clarification regarding the research were addressed in person or through the telephone. Further, before the commencement of interviews, critical issues – e.g. consent, recording, and privacy – in the information letter were discussed with participants again. The time, location and manner of the interview were determined by participants. Interviews were often conducted in their place of employment or in a public restaurant. In-depth interviews with key informants were conducted in the same period as in-depth interview and focus group data collection. In total, 23 key informant interviews were purposefully selected from a diverse range of institutional contexts (e.g. health, social services, educational levels, NGOs, government officials at all levels) and geographic context across the four districts of Greater Mukono District and the city of Kampala (see: Table 2.3.4.2 for details). Discussions were informed by the interview guides (see: Appendix C 1-4), which provided some flexibility during the interview process to probe for additional information. Interviews generally lasted between 45 minutes and 1 hour and were

often conducted in the English language. To ensure all relevant data were captured, in addition to tape recordings, notes of internal and external interruptions were taken to help provide further context for the data. Though some participants provided actual names, to ensure confidentiality, pseudonyms were used as exemplified in Chapter 4 and 5**.**

All data collection occurred until the point where no new data emerged from the research process and all themes were saturated (i.e. when "no additional data are being found whereby the (researcher) can develop properties of the category") (Glaser & Strauss, 1976, 65). Using theoretical saturation in the data collection process allowed me to examine when all the main variation of the phenomenon had been identified that fit within, and potentially fall outside of the original theoretical constructs. To avoid the criticism of simply 'searching' for findings to confirm and/or refute theories and maintain an openness in order to allow data external to the theory to emerge, maximum variation sampling was used. This provided the ability to actively search for disconfirming cases, seeking participants who do not fit the developing conceptual understanding of the data and to explore the (potential) nature and extent of these differences (Gibbs, et al., 2007).

Table 2.3.4.2 Data Collected from Research Phase One

District	**Method**		
	In Depth Interviews (n=40)	Focus Groups (n=10)	Key Informant Interviews (n=23)
Mukono	14	4	8
Buikwe	10	4	4
Kayunga	9	2	2
Buvuma	7	0	4
Kampala	—	—	5
Total	40	10	23

During this research process, I interacted with ROTOM staff daily, either discussing the research process, community life, or functions of their organization. I would often share anecdotes and experiences from the research, and they would give me feedback and help interpret the situation. Many of ROTOM's staff members were also interested in the practicalities of conducting research so I would share my knowledge of qualitative research procedures and point them to online resources to further their learning. During this phase, ROTOM staff further provided access to different communities and helped to identify potential elderly individuals who would be willing to participate in the research process.

While ROTOM was not directly involved in the implementation of the research process due to daily tasks and organizational responsibilities, we rather developed a bi-weekly schedule where we would meet and discuss the research process and any concerns among both parties. This provided a middle ground where ROTOM staff felt connected to the research and had ownership over the research but did not have to engage in daily field work as it would impede the functioning of their organization. As Chen, Poland & Skinner (2007) suggests, research partners do not have to be engaged in all aspects of the research. What is important is that the research provides opportunities for equitable engagement, and not impose another task on the research partner.

2.3.4.3 Data Collection Phase 2

During the process of analyzing data, Dr. Elliott, Dr. Hanning and I submitted a research proposal for funding from the Network for Aging Research Grant at the University of Waterloo to conduct follow up research and organize a knowledge translation event in Mukono to share our research findings with our research partners, along with other community members and key informants. Our proposal was successful, so I travelled back to Uganda to conduct more qualitative research and target some of the

specific geographic locations and populations I was unable to reach during the first phase of research. I was also able to probe further into some of the findings from the first research phase.

This second phase of research occurred between September 28th, 2018 and November 5th, 2018. Once arriving to the Uganda, I met again with my research assistants and partners at ROTOM to discuss the similar goals of the research, the specific geographic locations and individuals we hoped to purposefully sample. This research phase was conducted in a very efficient manner given that myself, my research assistants and research partners had developed strong, supportive working relationships. Both my research assistants and I had also developed good connections with elderly individuals in different districts who were able to connect us with other elderly individuals willing to participate in research. Our research partner, ROTOM, was also able to provide me with several of their contacts in the national government that I was unable to meet during my first research season. Although ROTOM only serves the elderly residing in the Mukono District, the organization has extensive connections with members in different levels of government and collaborative partnerships with NGOs across the country which tremendously helped to identify participants for this research in both phases of research.

All in-depth interviews, focus group discussions, and key informant interviews conducted in the second research phase followed the same procedures of the first research phase. In total, 12 in-depth interviews, 5 focus group discussions, and 13 key informant interviews were conducted during the second research phase which helped to provide a more accurate representation of aging issues in the four districts of the Greater Mukono area (see: Table 2.3.4.3)

Table 2.3.4.3 (A) Data Collected from Research Phase Two

District	Method		
	In Depth Interviews (n = 40)	Focus Groups (n=10)	Key Informant Interviews (n=23)
Mukono	1	—	3
Buikwe	—	1	2
Kayunga	7	2	2
Buvuma	4	2	3
Kampala	—	—	3
TOTAL	12	5	13

During both research phases, a total of 52 in-depth interviews, 15 focus group discussions, and 34 key informant interviews were conducted (see: Table 2.3.4.3 (B)).

Table 2.3.4.3 (B) Collected data from research phase 1 and 2

District	Method		
	In Depth Interviews (n =40)	Focus Groups (n=10)	Key Informant Interviews (n=23)
Mukono	15	4	11
Buikwe	10	5	6
Kayunga	16	4	2
Buvuma	11	2	7
Kampala	—	—	8
TOTAL	52	15	34

Characteristics of participants from both phases of IDI's and FG's are presented below in Table 2.3.4.4 and Table 2.3.4.5 respectively.

Table 2.3.4.4 In-depth Interview Participant Characteristics

Characteristics	**District**							
Background	**Mukono (n=15)**		**Buikwe (n=10)**		**Kayunga (n=16)**		**Buvuma (n=11)**	
	M (7)	**F (8)**	**M (5)**	**F (5)**	**M (8)**	**F (8)**	**M (5)**	**F (6)**
Currently Working (informal)								
Small scale agriculture	4	6	4	4	6	4	2	3
Fishing	—	—	—	—	—	—	2	
Selling Water	1	—	—	—	—	—	—	—
Sell/brew waragi	—	1	—	—	—	2	—	2
Not Working	2	1	1	1	2	2	1	1
Form of employment when young								
Physician	—	—	1	—	—	—	—	—
Teacher	1	—	1	—	1	—	—	—
Mechanic	1	—	—	—	—	—	—	—
Boda (taxi) driver	—	—	—	—	1	—	1	
Informal agriculture	5	8	3	5	6	8	4	6
Receive Government Pension								
Yes	—	—	—	—	—	—	—	—
No	6	8	3	5	3	4	6	6
No but supposed to	1	—	2	—	1	—	—	—
Receive SAGE financial support	—	—	—	—	4	4	—	—
Education Level								
No education	3	3	3	4	3	4	3	4
Some primary education	1	3	—	—	1	1	1	
Primary education	1	2		1	3	2	1	2
Secondary education	1	—	2	—	1	1	—	—
Graduate education	1	—	—	—	—	—	—	—
Marital Status								
Married	4	3	3	2	4	3	2	2
Single	1	1	—	—	1	—	1	1
Widowed	2	4	2	3	3	5	2	3

Raising OVCS								
Yes	5	6	3	3	4	5	2	3
No	2	2	2	2	4	3	3	3
Receive financial support from children								
Yes	2	4	1	2	2	2	2	2
No	5	4	4	3	6	6	3	4
Housing								
Reside in family home	5	6	2	2	4	3	2	2
Squatting	2	2	2	2	2	2	2	2
Kicked out of family home	—	—	1	1	2	3	1	2
HIV Status								
HIV positive (on ARTs)	1	1	—	—	—	1	—	—
HIV negative	6	7	5	5	8	7	5	6
ROTOM Status	—	—	—	—	—	—	—	—
ROTOM supported	5	5	—	—	—	—	—	—
Not ROTOM supported	2	3	5	5	8	8	5	6

Table 2.3.4.5 Focus Group Participant Characteristics

Characteristics	**District**							
	# of Participants							
	Mukono		**Buikwe**		**Kayunga**		**Buvuma**	
Background	**M (20)**	**F (20)**	**M (20)**	**F (30)**	**M (20)**	**F (20)**	**M (10)**	**F (10)**
Currently Working (informal)								
Small scale agriculture	17	16	15	26	16	16	6	6
Fishing	—	—	—	—	—	—	1	
Selling Water	—	—	—	—	1		—	—
Sell/brew waragi	—	—	—	—	—	1	—	2
Not Working	3	4	5	4	4	3	3	2
Form of employment when young								
Physician	—	—	—	—	—	—	—	—
Teacher	1	—	—	—	1	—	—	—
Mechanic	—	—	—	—	—	—	—	—
Boda (taxi) driver	1	—	—	—	—	—	—	—
Informal agriculture	18	—	—	—	—	—	—	—
Receive Government Pension								
Yes	—	—	—	—	—	—	—	—
No	19	20	20	30	13	13	10	10
No but supposed to	1	—	—	—	1	—	—	—
Receive SAGE financial support	—	—	—	—	6	7	—	—
Education Level								
No education	11	14	12	21	12	12	7	8
Some primary education	4	1	4	3	2	2	1	—
Primary education	4	5	4	6	5	4	2	2
Secondary education	1	—	—	—	1	—	—	—
Graduate education	—	—	—	—	—	—	—	—
Marital Status								
Married	12	9	11	19	10	10	11	11
Single	3	2	2	4	3	3	3	2

Widowed	5	8	7	9	7	7	6	7
Raising OVCs								
Yes	10	12	7	14	6	6	6	8
No	10	8	13	16	14	14	14	12
Receive financial support from children								
Yes	6	6	4	12	5	8	5	6
No	14	14	16	18	15	12	20	14
Housing								
Reside in family home	12	9	14	17	13	10	12	12
Squatting	6	8	5	10	5	9	7	6
Kicked out of family home	2	3	1	3	2	1	1	2
HIV Status								
HIV positive (on ARTs)	—	2	—	3	—	—	—	1
HIV negative	20	18	20	27	20	20	20	19
ROTOM Status								
ROTOM supported	20	20	—	—	—	—	—	—
Not ROTOM supported	20	20	20	30	20	20	20	20

All in depth interviews and focus groups conducted in Swahili/Luganda were simultaneously translated into English during data collection.

2.4 Data Analysis

2.4.1 Quantitative Analysis

Structural equation modelling (SEM) was used to examine how the link between age and SWB among older adults is mediated by different factors. These multiple potential mediators were then tested to examine how they mediate the relationship between age and SWB. This method enabled the estimates for the total effect (c path) of age and subjective wellbeing (i.e. association of age with wellbeing), the direct effect (i.e. association of age with wellbeing controlling for the mediators), and indirect effects of

age with wellbeing through each mediating factor (indirect effects). This method also enabled an examination of the extent to which each mediating factor independently contributed to an explanation of the association of the focal variable (age) with the outcome variable (wellbeing) as well as a comparison between mediators. Details of the analysis are described in Chapter 3.

2.4.2 Qualitative Analysis

The audio recording from each interview was transcribed verbatim by an individual who held a MA in public health and administration and was fluent in English for subsequent thematic analysis using NVivo (QSR International). A template organizing style (Crabtree & Miller, 1999) was used to code the transcripts, consisting of the following steps. First, transcripts were scanned in order to determine codes to compose a coding manual. Codes were established using a deductive approach, which explored the data for themes related to the research objectives (e.g., factors influencing health and wellbeing) and theoretical constructs as well as an inductive approach, which determined themes emerging from the data. Second, following Strauss and Corbin (1998), data were coded line-by-line to produce textual elements which were organized into themes and sub-themes. Third, the constant comparative method (Corbin & Strauss, 2008) was used to determine similarities and differences within the data, to refine codes and ensure proper categorization of themes. These themes were then compared, connected, and interpreted in relation to the research objectives (Crabtree & Miller, 1999).

To enhance the qualitative rigour of the findings, inter-rater reliability was assessed for the in-depth interviews, focus group discussions, and key informant interviews by determining between-researcher agreement using the methods described by Miles and Huberman (1994). For each participant group, a second researcher trained in qualitative analysis coded two transcripts and the researchers'

coding of the same transcript were compared to calculate agreement (whether the same codes were applied to a section of text) using the calculation: (# of agreements)/(Total # of agreements + disagreements). Agreements were defined as the same code applied to the exact same section of text. When there was a disagreement, the two researchers discussed why they applied each code and came to a resolution, leading to changes to the coding manual before coding the remaining transcripts. Inter-rater reliability was calculated to be greater than 70% for all participant groups and was deemed acceptable (Miles & Huberman, 1994).

2.5 Integration of Findings

Fetters et al. (2013) define three levels of integration in mixed methods research: integration at the design level, methods level, and interpretation and reporting levels. This model was used to integrate the quantitative and qualitative findings. At the design level, an embedded convergent parallel design was used; at the methods level, building and merging was employed, and at the interpretation and reporting levels, data was integrated narratively (Fetters et al., 2013).

At the design level, the use of a convergent parallel design allowed me to plan how my methods would interact throughout the study and surmise how data could be integrated in the interpretation and reporting of results. As indicated in Figure 2.3 (B), an embedded building approach was used where preliminary quantitative data analysis informed the data collection in the qualitative research phase. Qualitative findings provided comprehensive explanations to our preliminary findings and also identified new domains (e.g. housing structures, access to basic resources) for incorporation in the final quantitative analysis. This helped explain preliminary quantitative findings and also inform the choice of variables included in the finale quantitative analysis. Building occurred again when findings from the quantitative

phase and first qualitative phase influenced data collection in the second qualitative research phase (e.g. the inclusion of additional geographical locations and personal characteristics).

Merging occurred in multiple ways. First, the qualitative findings were triangulated; interview findings for each participant group were compared, allowing for validation and clarification (Patton, 2015). Subsequently, merging involved comparing the independent quantitative and qualitative analyses to identify areas of similarities and differences (Creswell & Plano Clark, 2011; Curry & Nunez-Smith, 2015). Through this process, areas of confirmation (agreement between the individual findings), expansion (findings from one method explain findings of another), and discordance (inconsistencies and contradictions) were identified (Fetters et al., 2013). When discordance occurred, the individual methods were re-examined and potential explanations for these differences were suggested (Curry & Nunez-Smith, 2015; Fetters et al., 2013; Moffatt et al., 2006).

During the reporting phase, narrative integration occurred. Initially, a staged approach was used to report findings from each individual method in separate articles (Chapter 3-5) (Fetters et al., 2013). However, a weaving approach was subsequently used, where quantitative and qualitative findings related to the overlapping themes were compared (Chapter 6) (Fetters et al., 2013).

2.6 Knowledge Dissemination

The iKT framework was particularly useful in the translation of our research results to knowledge users and holders. To disseminate the research findings to the affected study areas, I organized a day long *Aging, Health and Wellbeing Workshop* on December 6th, 2018 at the ROTOM facility in Mukono Uganda (see: Appendix D). This workshop included the primary knowledge users and holders involved in this research (i.e. our research partners, diverse key informants, and grassroot elderly groups in Uganda),

and also included educators and NGOs from Canada, United States and Ethiopia. The purpose of the workshop was threefold:

a) To bring together a variety of stakeholders to share research results;
b) To put research into action;
c) To develop a research agenda for aging, health and wellbeing.

The workshop comprised two main sessions. The first morning session was devoted to presenting and discussing research for aging populations. I presented research results collected in 2017-2018 (see: Appendix 2.5). ROTOM, COHESU, and ARCAD (two NGO's in Kenya and Uganda, respectively) also presented work related to aging populations (see: Appendix 2.6, 2.7). The afternoon session was devoted to roundtable discussions centering on two main topics. The first topic focused on moving research results into action. Participants were asked "What can we do with the research information now?". The second table discussion focused on developing a research agenda going forward. Participants were asked "What is it that you feel you need to know, that we have no answers for?". Not only did this workshop share results with knowledge holders in an easily accessible format, it also integrated the research results into further action. By providing the knowledge holders with evidence, they were able to create change on the ground. Participants identified that after being presented with evidence, they were now able to: i) educate and disseminate knowledge to the wider community, ii) collaborate and integrate findings with other services and institutions, iii) empower and engage older persons, and iv) engage with policy and decision makers.

Moreover, by bringing knowledge holders together, they were able to work together and develop a long-term agenda to address issues of aging, health, and wellbeing in Uganda and sub-Saharan Africa more broadly. Participants highlighted that more research employing different research designs were needed in the areas of i) life course and intergenerational dynamics, ii) care relations, iii) health, and iv)

government and political systems. To foster relationship building and collaboration, the workshop provided many opportunities for knowledge holders to interact, share their thoughts, converse and built connections with each other. Providing knowledge holders with the opportunity to build relationships and connections amongst themselves is very beneficial in the sustainability of an aging, health and wellbeing agenda moving forward. Moreover, all participants were provided with the contact details of all participants and were also sent a report of key findings and discussions from the workshop (see Appendix A). See Table 2.6 for the adapted CCGHR partnership tools employed in the research process.

Table 2.6 Adapted CCGR Partnership Assessment Toolkit

Research Phases	**Components Addressed**
Phase 1: Inception	a) Established the Vision of the Partnership: • Identified intentions and motivations for involvement in partnership • Discussed intended outcomes and deliverables b) Roles & Responsibilities: • Jointly discussed and agreed what resources each partner will provide (financial, human resources, equipment, knowledge) c) Established Research Projects and Priorities: • Partners involved in the development of research questions and objectives d) Communication" • Organized a communication schedule to ensure effective communication with members
Phase 2: Implementation	a) The Evolution of the Partnership: • Discussed if project goals were 'on track' and devised strategies to meet targets • Discussed if timelines were being met • Discussed if all partners were satisfied with the research process, and developed strategies to address difficulties if they arose
Phase 3: Dissemination	• Engaged all relevant stakeholders to anticipate the dissemination of research results. • Conversed with partners and knowledge holders about their satisfaction with the research dissemination and results • Attempted to ensure that all knowledge holders were adequately represented in the dissemination of the results [i.e. ROTOM, other NGOS, educators, health providers, grassroot elderly groups, government officials at all levels (parish, municipal, district, national)].

2.7 Methodological Rigour

Techniques to address quantitative (i.e., internal validity, reliability, replicability) (Curry & Nunez-Smith, 2015) and qualitative rigour (i.e., credibility, dependability, transferability, and confirmability) (Lincoln & Guba, 1985) were used for the individual methods within the design. Considerations for mixed methods beyond the criteria for quantitative and qualitative rigour was also employed throughout the research process, aligning with the Good Reporting of a Mixed Methods Study (GRAMMS) checklist (O'Cathain, Murphy, & Nicholl, 2008) (see: Appendix E).

2.7.1 Quantitative Rigour

Specifically, in the quantitative component of this work (Objective 1/Chapter 3), procedures to ensure validity, reliability, and replicability were undertaken. Validity (the extent to which a concept is accurately measured) was ensured in the design of the secondary data source, SAGE. For instance, the SAGE survey assessed subjective wellbeing (happiness) through different versions of the DAY Reconstruction Method which provided a the means to comprehensively assess an individual's day, thus enhancing the context validity of the subjective wellbeing measure (see: Kowal, Chatterji, Naidoo et al., 2012; Kahneman, Kruger, Schkade et al., 2004; Miret, Caballero, Mathus et al., 2010). Equally, to ensure content validity in the secondary data analysis, the World Health Organization quality of life brief (WHOQOL-Bref) questionnaire was used to provide a measure of subjective wellbeing. This questionnaire has been shown to be a valid measure of SWB/QOL among elderly populations in diverse global contexts (Skevington, Lotfy, O'Connell, 2004; Naumann, Byrne, 2004).

Moreover, confirmatory factor analysis was performed to assess construct validity. Confirmatory factor analysis is a method that allows the researcher to test the existence of any relationship between the observed variables (i.e. age and subjective wellbeing), and their underlying latent constructs (i.e.

provide/participate in a group, receive remittance/government assistance, etc.). To do this end, the researcher draws on theory, empirical research, or both, and postulates an *a priori* relationship and then tests the hypothesis statistically. Four criteria were used to investigate construct validity. First, we examined the eigenvalues of each factor to measure how much variation in the total sample was due to each factor. All eigenvalues with a confidence interval greater than 1.0 were retained, as deemed appropriate by the Kaiser rule (Guttman, 1954; Kaiser 1960). The eigenvalues were then graphed in decreasing order on a scree plot to determine the number of factors to retain. The scree was identified (i.e. the proportion of the graph where the slope of decreasing eigenvalues approaches zero), which then indicated a good number of factors to retain (Cattell, 1966). Orthogonal varimax rotation was also conducted to ensure that there was no intercorrelations between variables. This helped to maximize the correlations between variables (i.e. loadings) and result in a high correlation between remaining eigenvalues (Stevens, 1996). Lastly, while we did have an explicit test of a single factor solution, the first item had Eigenvalue of 5.19 which explained 52% of the variation, large enough for us to be reasonably confident that all 10 items are trapping on a single dimension (i.e. the 10 items can be explained using one single factor).

Reliability (the consistency of a measure) was addressed in the design of the WHOQOL-Bref survey questions related to quality of life, life satisfaction and affect. Specifically, to assess the internal consistency of the subjective wellbeing measure Cronbach's alpha was used (Heale & Twycross, 2015). We obtained an overall high score (α =0.91) and high overall sampling adequacy (kmo= 0.89), enhancing the reliability of the results. Lastly, replicability (the degree to which a study supplies the relevant detail to verify the results through repeating the study) was addressed by providing a clear and complete

explanation of the participants, materials, procedures and analysis of the quantitative component of this research.

2.7.2 Qualitative Rigour

To enhance rigour in the qualitative component, I used multiple strategies. First, to enhance credibility (authentic representations of the experience), I used purposeful maximum variation sampling in order to target specific groups (e.g. participants 50-70 years old, 70+ years old, health workers, educators, government officials, etc.) and provide deep understanding of the context (Baxter & Eyles, 1997). Supplemental purposeful sampling was used to seek out additional 'information- rich cases' by asking participants if they knew anyone that they believed would be interested in participating in the interview process. Other strategies I used to enhance credibility included peer debriefing where I would discuss the interpretation of the results with another member of the research team (i.e. RA or ROTOM). I also engaged in member checking during the interview process where participants were asked to confirm their agreement with the interviewer's summary of content they provided when discussing the interview questions. Doing this helped to address any miscommunication through the translation process and ensure accurate representation of results (Bryman, 2003). I also strove to develop a rapport with all of my participants in the research process. To do this, I would greet all participants in the local language, interact with participants in culturally appropriate ways, and ensure participants were comfortable throughout the interview in order to foster deep conversation and reduce the power dynamics associated with the research process. My prolonged engagement living in Uganda for 4 months also allowed me to develop a thorough contextual understanding of participants' responses and accounts, as well as understand the culture of relevant groups. Lastly, to enhance credibility, the findings were triangulated through *multiple qualitative methods* to check consistency of findings; through *multiple participant*

sources (i.e. men or women 50-70 years, 70+ years), through *analyst triangulation* by involving another academic to review the findings and enhance interrater reliability; and through *theoretical triangulation* by employing multiple and complementary theoretical perspectives to analyze the data (see: Patton, 2015).

To maintain dependability (consistency in interpretation, minimizing idiosyncrasies) (Baxter & Eyles, 1997), all interviews, focus groups and key informant interviews were audio recorded, transcribed verbatim, and the transcripts were proofread to reduce errors prior to coding. During the research process, I also took extensive field notes covering a range of topics (e.g. community characteristics visited, contextual environments, reasons why some participants where included/not included, why certain decisions were made, etc.) in order to produce an audit trail and enhance the transparency of the research process.

Although qualitative results are often specific to a certain place and time, experiences and meanings may be similar to a larger group. Thus, to address transferability (the fit outside of the study context), I first provided thick descriptions of the research settings in order to increase understanding of the types of geographical, social and cultural contexts where results may be applicable. I then generated detailed descriptions of participant opinions and responses after each interaction to develop a more in-depth understanding of the types of contexts where similar findings may be application. Moreover, conducting interviews to saturation (the point when no new information or themes were observed) helped to identify the possible perceptions and experiences related to aging, health and wellbeing, that could be similar in different geographic or sociodemographic contexts (Morse, 2015).

2.7.4 Positionality

While iKT aims to promote collaborative relations in the production of knowledge, the research process is inevitably fraught with dynamics of power and privilege (Wallerstein, 2017; Chavez, et al. 2008). Due to my unearned and earned privilege as a white, middle class, cis-gendered, able bodied, educated, North American, young female, my subject positions meant that I was often located within the social systems that oppressed the very people I sought to engage. Not only did this pose internal challenges for me on an ongoing basis, it also called into question how I could appropriately respond to these complex dilemmas while still working to uncover health injustices.

To help me with this process, I drew on work that views privilege and oppression as two sides of the same metaphorical coin (see: Nixon, 2017; Goodman, 2015). On one side of the coin, are the societal patterns that give certain groups of people an unearned advantage based on factors such as race, gender, and ability, whereas on the other side of the coin are the societal patterns that give certain groups of people an unearned disadvantage based on those same factors. Reflecting on my privilege in this way helped me recognize the many advantages bestowed upon me during the research process that were beyond my control. For instance, as a white, able bodied, educated person, I not only held a racialized position of power relative to my research partners and study participants, my education and physical abilities further put me in a position of power and privilege relative to the majority of those I interacted with on a daily basis. In the iKT process, I recognized additional power hierarchies between myself and our community partner. For instance, during the initial phases of our partnership, I found that members of ROTOM would oftentimes look to me for my ‘expert’ academic knowledge which put me in an awkward position, given that my main intention was to elicit their expert knowledge. At times, it made me question

and reflect on the ways my 'outsider status' would influence the co-construction of knowledge throughout the research process (see: Cruz, 2008).

At the same time however, I was also acutely aware of how my identity as a young female, put me in a position of disadvantage during the reach process and community interactions. For example, when interviewing senior male key informants, I found that some would not take me seriously due to my age or subject me to inappropriate questions due to my gender. Similarly, during many of my community interactions, men would interact with me in a range of ways from 'cat calling', to grabbing, to attempting to follow me home. The range of encounters I experienced during the research process allowed me to recognize how privilege and oppression operate in conjunction with multiple societal systems of power (Nixon, 2017). This intersectionality meant that I, along with all others I interacted with, occupied different sides of the same coin, with me, most of the time positioned at the top.

Rather than defending against these contradictions, I followed Luttrell's suggestion (2000) and sought to recognize and embrace the contradictions by constantly reflecting on how my positionalities influenced the research process. Engaging in constant reflection led me to seek strategies to would allow me to work in allyship with those involved in the research as well as my broader community colleagues (Nixon, 2017). While allyship is "an active, consistent, and arduous practice of unlearning and re-evaluating, in which a person in a position of privilege and power seeks to operate in solidarity with a marginalized group' (The anti oppression network, 2019), I made a cognizant effort to practice ways that would allow me to work in allyship with my community partners. Although I am still on this journey, I purposefully tried to create more space for my partners to lead in discussions by speaking less and listening more. By creating more shared spaces for discussions, we were not only able to discuss issues related to research participation, but also delve deeper into aspects of privilege, power and race that could

support shared, mutual benefits for both the community group and the researcher, instead of dominance by one group. Equally, I strove to respect the identities and backgrounds of my team members, which I found not only enhanced our discussions of preliminary findings, but also created a safe environment for communication with my RA and ROTOM team partners.

Over time, I found that this ongoing reflexive process shifted power dynamics in the research process. No longer was I positioned as an outsider, but rather in a space of 'betweenness', that is, doing fieldwork "from a position that is neither inside nor outside" (Katz, 1994; Macia-Lees, et al, 1989:33). I was sometimes called 'auntie', 'sister' or 'colleague' by many ROTOM staff members and elders in the community, but also sometimes as a 'visitor' or 'guest'. Occupying both positions proved useful in the research as I was able to ask questions that were of practical necessity for the needs of the community and research partners, but also query substantive questions relevant to the research. I continue to reflect on my power and privilege on a daily basis and strive to become a better ally in the struggle for improved health.

2.8 Chapter Summary

The preceding chapter outlined the paradigmatic approach to research, the research design and methodology used to address the three research objectives. Strategies to ensure rigour were discussed in the final section of the chapter.

Chapter Three

Manuscript #1: Social Determinants of Subjective Wellbeing Among the Elderly: A Case Study of Uganda

Rishworth, A., Elliott, S.J., Kangmennaang, J. (2019) (accept with revisions). Social Determinants of Subjective Wellbeing Among the Elderly: A Case Study of Uganda. *International Journal of Wellbeing*.

Abstract

The world's population is aging, yet the wellbeing of this aging demographic is unequally distributed. Of all global regions, the elderly in Sub-Saharan Africa (SSA) have the lowest global levels of subjective wellbeing (SWB). Concomitantly, SSA is projected to see the largest absolute rise of its elderly population by 2050. Despite this situation, little empirical attention has been directed towards uncovering determinants for SWB declines in old age in the SSA context. This study contributes to this literature by examining the association between age and SWB by gender in the Central Region of Uganda. Using data from the 2013 Uganda Study on Global Aging and Health, we employ structural equation modelling (SEM) to investigate how social and structural determinants directly and indirectly shape SWB among the elderly and examine how this relationship differs by gender. Results show increased age is associated with poorer subjective wellbeing (OR=0.43, p=0.01), but this association is mediated by care responsibilities, financial status, social supports and working status, with the strength of these relationships differing by gender. Likewise, care giving responsibilities had a direct and negative association with SWB irrespective of age. These findings underscore the need to alleviate inequalities in SWB among the elderly in Uganda.

Keywords: Subjective wellbeing, Aging, Uganda, Social determinants of subjective wellbeing

1.0 Introduction

As global populations age, countries and international organizations across the world are seeking ways to enhance the subjective wellbeing (SWB) of older populations (e.g. World Health Organization (WHO) Strategy and Action Plan for Aging and Health; AGE UK, Healthy Aging Strategy New Zealand) (Jivraj, Nazaroo, Vanhoutte, Chandola, 2014; WHO, 2015). The growing focus on sustaining the wellbeing of older populations is in part is due to the recognition that SWB is associated with positive health and longevity (WHO, 2015; Steptoe & Deaton, 2015). Research from high income countries frequently finds that the relationship between age and SWB is U-shaped, with the highest wellbeing achieved during youth and old age (Steptoe et al., 2015; Blanchflower, Oswald, 2008; Pinquart & Sorensen, 2000). However, this pattern is not universal and varies geographically (Steptoe et al., 2015). In low and middle-income countries (LMICs), the relationship between age and SWB is largely negative (Deaton, 2008; Steptoe et al., 2015). Of all global regions, Sub-Saharan Africa (SSA) has both the lowest perceptions of SWB among elderly men and women, and an increased prevalence of worry, stress, and unhappiness with increasing age (Steptoe et al., 2015; Deaton & Tortora, 2015). This trend is particularly concerning given that SSA is expected to see the largest absolute rise of its elderly population, increasing from 40.6 in 2010 to 214 million by 2050 (UNDESA, 2015).

Old age is generally a period of life which poses particular challenges for health and wellbeing (WHO, 2015). While aging is associated with complex physoiogical changes, elderly populations in SSA experience unique circumstances — human rights abuses, gender rights abuses and the longterm impacts of HIV— that pose signifigant challenges to their health and wellbeing (Aboderin & Hoffman, 2017; Shatz et al., 2015). Morover, due to the paucity of formal and informal social support for the elderly on the continent, the majority of this demographic typically remain engaged in the informal economy, and/or

rely on informal support through intergenerational and community networks (Perkings, Subramanian & Christakis 2015; Aboderin & Hoffman, 2017). Due to growing rates of urbanization, migration and shifts in social norms, however, these informal support systems are changing (Manderson & Block, 2016; Schatz, Madhavan, Collinson, Gómez-Olivé, & Ralston, 2015). While family members may remit money and goods to elders, such flows are typically irregular and often not enough to provide economic security (Gureje et al., 2006; Gureje et al., 2008). Likewise, the impacts of HIV/AIDS in parts of SSA have severely affected older populations as they have lost both financial and material support from adult children, experience growing burdens of adult and childcare giving responsibilities, and suffer increased psychosocial distress (Schatz & Seeley, 2015). While these factors likely mediate the relationship between aging and SWB among the elderly in SSA, their relative importance remains unknown.

1.1 Subjective Wellbeing and Aging

Subjective wellbeing is defined as "a person's cognitive and affective evaluations of his or her life" (Diener et al., 2002 pg. 63). The cognitive element refers to what one thinks of his/her life satisfaction in global (life as a whole) and domain terms (specific areas of life: work, relationships, etc.), whereas the affective element refers to emotions, moods and feelings (Diener et al., 2002). Affect is considered positive when emotions, moods and feelings experienced are pleasant (e.g. joy, elation, affection, etc.), or negative when the emotions, moods and feelings experienced are unpleasant (e.g. guilt, anger, shame, etc.) (Diener et al., 2002).

Current studies, from high income countries, indicate that a range of factors influence subjective evaluations of wellbeing in old age (Read, Grundy, Foverskov, 2016; Pinquart & Sorensen, 2000). Social networks, relationships and support systems are thought to be strongly associated with SWB in later life

(Lau & Machizawa, 2012; Tanguchi & Potter, 2016; Caron, 2012). Studies suggest that as physical functions decline, and activities reduce with age, social support systems (e.g. family, friends, clubs and groups) are some of the main sources in which to gain social relationships and happiness in old age and thus are essential predictors of SWB (Lau & Machizawa, 2012; Tanguchi & Potter, 2016). Social relationships with family, friends and neighbours facilitate communication and interaction which can improve the wellbeing of the elderly (Cramm et al., 2013; Howley et al., 2015). In one way, supportive relationships can buffer negative psychological outcomes in old age (Kloos & Townley, 2011), reducing the incidence of depression and mental discomfort in old age (Kim, 2010). In another way, high quality social relationships can improve positive outcomes of SWB, by serving as a resource to help individuals fulfill emotional goals and maintain functionality during later life (Caron, 2012). For instance, Taniguchi & Potter (2016) illustrate that high-quality relationships mitigate challenges related to aging and significantly improved peoples' life satisfaction and happiness.

Marital status and marital transitions are important for SWB in old age (Diener, Gohm, Suh, Oishi, 2000; Mroczek & Spiro, 2005; Pinquart & Sorsen, 2001). Several studies indicate that being married is strongly and significantly related to higher SWB since marriage provides social supports and the accumulation of resources that can directly and indirectly affect SWB in later life (Read et al., 2016; Mroczek & Spiro, 2005; Diener et al., 2000[1]). A meta-analysis of 286 studies found that older married adults enjoy higher SWB compared to their unmarried peers (Pinquard & Sorensen, 2001), while other longitudinal studies demonstrate that transitioning out of marriage during later life, due to divorce or

[1] A sample of more than 58,000 adults in 45 countries indicate being married is strongly and significantly related to higher SWB.

death, is associated with decreases in SWB (e.g., Chipperfield & Havens, 2001; Lucas, Clark, Georgellis, & Diener, 2003), oftentimes with the loss of the marriage bond having a more detrimental impact on men's SWB than women's (Bowen et al., 2017; Amato, 2010).

The impact of socioeconomic status on outcomes of SWB in old age is mixed (Jivraj & Nazaroo, 2014). While education and income are strong predictors of SWB for young and middle-aged adults (Diener et al., 1999), their importance for SWB in later life is less clear (George, 2009; Jivraj & Nazaroo, 2014). Some suggest that high socioeconomic status can directly affect SWB through access to financial resources and indirectly through being able to draw on a range of cultural and social resources (Cheung & Ngan, 2011). Netuveli et al. (2006) find SWB is greater among higher income retired individuals and lower among elderly who are unemployed and in poor financial circumstances. Yet Yang (2008) finds that education significantly predicts happiness during youth and adulthood but is unrelated to happiness after age 50. Likewise, a meta-analysis of 286 studies, revealed that while both income and education were associated with SWB in later life, the strength of their association was relatively small (Pinquart & Sorensen, 2000).

The importance of gender for outcomes of SWB in old age is complex. While women in their adolescence and adulthood, on average, have higher levels of SWB compared to men (Graham & Chattopadhyay, 2013), the importance of gender in old age varies. On one hand, studies reveal that older women have lower levels of SWB than older men due to disadvantages in income, social relations, and socioeconomic status that accrue in later life (Pinquart 2001; Meggiolaro, 2013). Other studies suggest, however, that older men experience lower SWB since they have fewer tasks from which to gain happiness and are more prone to have difficulties developing and continuing intimate relationships which could protect against low SWB (Zebhauser 2014; Cheueng & Ngan, 2011). Alternatively, other studies reveal

small but insignificant gender effects on quality of life (Netuveli et al., 2006; Stone, Schwartz, Broderick, Deaton, 2008).

This current literature suggests the relationship between age and SWB is mediated by a range of socioeconomic and demographic factors that can both positively and negatively impact SWB. Yet, it is unclear whether findings from high income settings are transferrable to SSA. Although only a handful of studies have explored SWB among the elderly in SSA (i.e. Nigeria, Ghana), they reveal that elders with low socioeconomic status, few social supports, and/or being a women are more likely to report poor SWB compared to their economically advantaged, socially connected and male counterparts (Calys-Tagoe, 2014; Gureje et al., 2008; Adebowale et al., 2012). While these studies provide insight into the age-SWB relationship in SSA, little attention has been given to the relationships between age and SWB in the East African context of Uganda, nor considered how other factors mediate the age-SWB relationship.

Considering experiences of SWB vary geographically, based on a complex set of sociocultural and economic environments in which a person resides (Diener & Chan, 2011; Pavot & Diener, 2008; Steptoe et al., 2015), a more thorough consideration to the matrix of variables which shape outcomes of SWB in old age is critical, especially in the East African context of Uganda, where the elderly population has no access to formal government pensions, elevated HIV/AIDS care burdens, and high levels of gender inequality (UBS, 2015; MGLSD, 2013). As recommended from a systematic review by Read, Grundy & Foverskov (2016), it is important to further investigate the possible mediating factors and pathways that inform SWB in old age, especially in developing country contexts (Steptoe et al., 2015; Ulloa, Moller, Sousa-Posa, 2013).

1.2 Objectives

As part of a larger project that aims to develop a Global Index of Wellbeing (GLOWING)) through the exploration of population wellbeing in LMICs (see: Elliott; Dixon, Bisung & Kangmennaang, 2017), this paper seeks to explore the links between age and SWB among older adults and how these relationships are mediated by different demographic characteristics, care factors, health care indicators, and social-structural factors in Uganda's Central Region. Specifically, we (1) examine the direct and indirect effects of age on SWB through each mediating factor, and (2) compare how these direct and indirect effects vary by gender.

2.0 Theoretical Context

To examine how the environments of Uganda's Central Region shape outcomes of SWB in old age, this study adopts and extends the WHO Commission on Social Determinants of Health (CSDH) (Figure 3). This framework recognizes the role social factors (i.e. non-biomedical factors) play in shaping the health and wellbeing of individuals and populations. By conceptualizing outcomes of poor health and wellbeing as products of economic and social inequality, the CSDH provides the conceptual space to begin examining how the relationship between age and SWB is mediated by various socio-economic and demographic factors— as deemed important by other studies (Solar & Irwin, 2010; Pinquart, 2000; Pinquart et al., 2001; Read & Grundy, 2016).

According to the CSDH, understanding inequalities to health and wellbeing requires examining the origins of social inequality and the pathways through which these inequalities emerge (Solar & Irwin, 2010). Indeed, older populations in SSA have the lowest global life expectancy (e.g. 38 year difference compared to high income countries) and highest disease burdens (both chronic and infectious) in old age, due to the cumulative impacts of inequalities across the life course (Sadana, Blas, Budhwani, 2016;

WHO; 2016; 2015). Yet even within this demographic, inequalities exist (WHO, 2015; Beard et al., 2016). Older populations in socially and economically deprived positions are exposed to more health risks, experience greater health problems, and have shorter life expectancies— all of which negatively impact happiness, life satisfaction and subjective wellbeing (WHO, 2015; 2016).

Since social and economic inequalities stem from the discriminative impacts of structural and individual allocation and control of resources to individuals and populations (Solar & Irwin, 2010), examining these inequalities among elderly populations in SSA is imperative given the dearth of policies and government financial or social systems to address their needs (Aboderin & Hoffman, 2017; Beard et al., 2016; WHO 2015;). For instance, when the allocation of resources for populations at the household, community and country level is exercised in a manner that neglects elderly populations, it creates disparities in access to economic and social resources and creates long-term inequalities. At the same time however, individual attributes and life choices simultaneously contribute to disparities in one's socio-economic position. Together these factors work to create inequalities to health and wellbeing (Marmot & Wilkinson, 2000; Wilkinson & Marmot, 2003).

As indicated in Figure 3, disparities in senior's health and wellbeing are informed by two sets of determinants—structural and intermediary. Structural determinants comprise all social and political mechanisms (governance, macro-economic policy, social policy, public policy, social and cultural values) that generate, configure and maintain and individuals' socioeconomic positions (i.e. income, education, occupation, gender) within hierarchies of power, prestige and access to resources (Solar & Irwin, 2010). In old age, these hierarchies become even more important due the cumulative impact of inequalities experienced over the life course (WHO, 2015; Sandana et al., 2016). Overall, these structural

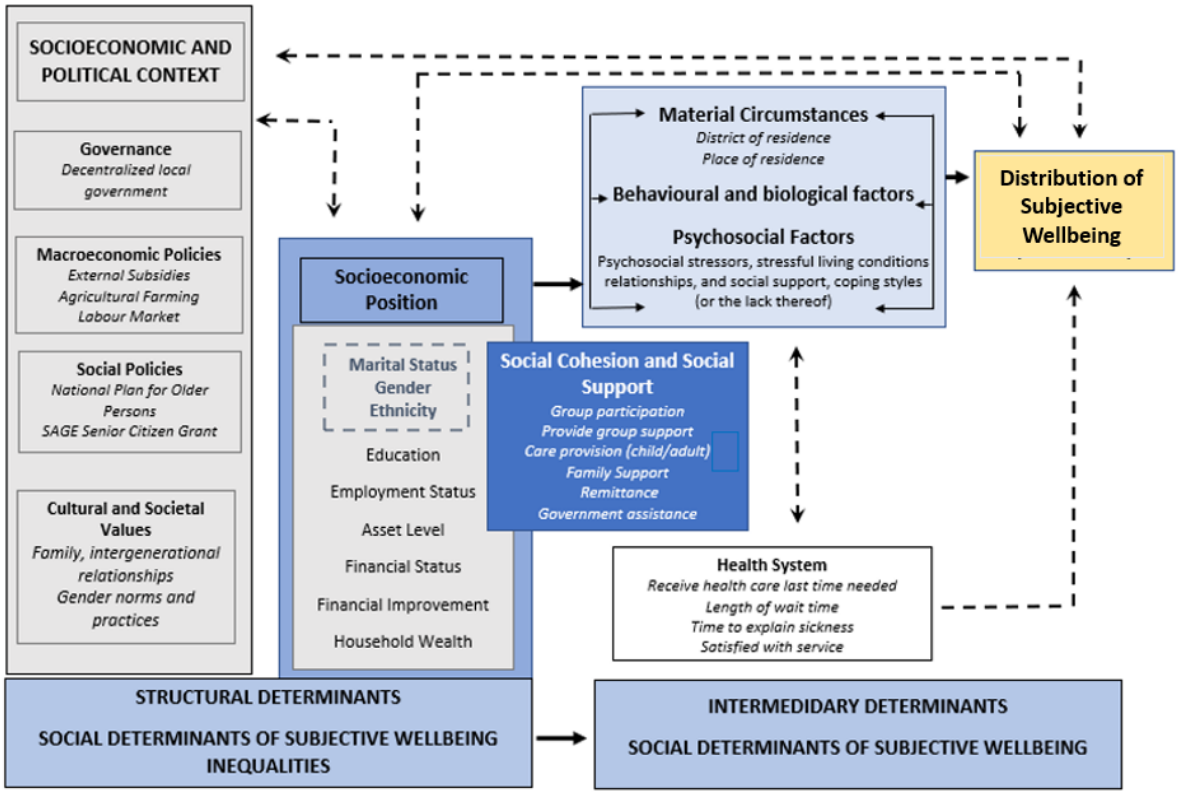
determinants are the social processes that shape the underlying downstream intermediary social determinants of health (Wilkinson & Marmot, 2003). (see: Figure 3).

Intermediary social determinants of health comprise material conditions (e.g. living and working conditions, neighbourhood, consumption abilities), psychosocial factors (e.g. psychosocial stress factors, social support or lack thereof), behavioural and biological factors (e.g. the distribution of nutrition, tobacco, alcohol, physical activity, genetic factors), and the health system itself. Together, these factors shape one's exposure to health enabling or compromising conditions, that over the life course contribute to inequalities in health and wellbeing in old age (Sandana et al., 2016; Solar & Irwin, 2010). Psychosocial factors, such as social support networks and social cohesion between individuals and communities can interact with structural factors, either enhancing or restricting health and wellbeing outcomes. For instance, networks of relationships among groups of people, a high degree of reciprocal trust, and strong social norms can provide material and non-material benefits for mutual and collective gains (Putnam, 2000; Popay, 2000; Moore, et al., 2006), as well as buffer against the deleterious impacts to health and wellbeing among individuals in low socioeconomic contexts since they serve as critical resources for the realization of needs among group members (Aslund et al, 2014; Robinette et al., 2013). Interactions between structural and intermediary determinants then result in differentiations in (inequalities) in health and wellbeing (see: Figure 3), which can feed back into the structural determinants of health and have a positive, negative or neutral influence on future generations (Solar & Irwin, 2010).

Together, this framework provides the theoretical space to study the social production of subjective wellbeing. Employing the CSDH to examine the subjective wellbeing of elderly populations in Uganda enhances knowledge on two interrelated fronts. First, using the CSDH not only addresses calls from the WHO for more engagement on the social determinants of wellbeing in old age (WHO, 2015;

Beard, Officer, de Carvalho et al., 2016; Sadana, et al., 2016), it also provides empirical evidence to begin addressing knowledge gaps identified by both the WHO Report on Aging and Health and the Global Strategy and Action Plan for Aging and Health (see: WHO, 2015; WHO 2016). Second, since the CSDH framework has, to the best of our knowledge, not been applied to the study of social determinants of subjective wellbeing, nor to the study of elderly populations in SSA, the application of the CSDH framework to this case study provides a steppingstone on which to build future investigations of social determinants of SWB.

Figure 3.0. The Social Determinants of Elderly Subjective Wellbeing in the Central Region of Uganda
Source: Adopted from the WHO Commission on Social Determinants of Health Framework (Solar & Irwin, 2010).



3.0 Context

3.1 Uganda

Uganda has a population of 36 million people which is projected to increase five-fold by 2100, becoming one of eight countries to account for over half of the world's population (Bank, 2014). While it is one of the least developed countries in the world, Uganda has seen the life expectancy of its population grow from 43 to 56 years between 1990 and 2011 (UBS, 2012), translating into growing numbers of older people. Despite substantial inequalities in life expectancy between Uganda and high-income countries, its older population (60yrs+) is projected to increase 5-fold from 1.3 million in 2010 to 5.5 million by 2050 (WPP, 2012; WHO, 2015).

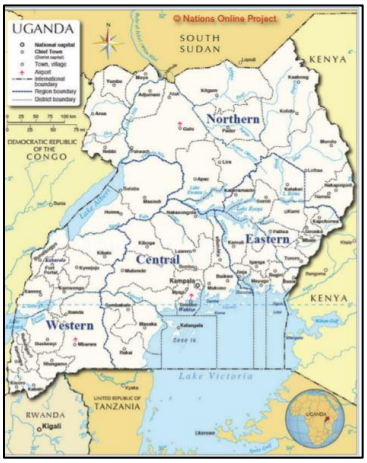
Due to the lack of state run pensions, the majority of the elderly (i.e. 98%) have no financial security, and in turn remain engaged in informal subsistence farming (e.g. 85%) and/or depend on communal and intergenerational relations for both financial and social support (Mugisha et al., 2013; Seeley et al., 2010). Although Uganda is piloting the Senior Citizens Grants under the Irish Aid Social Assistance Grants for Empowerment (SAGE) Scheme, income support grants have yet to be equitably rolled out across the country (see: Hickey & Bukenya, 2016). Uganda has the highest youth unemployment rates in SSA, which is driving the high rates of rural-urban migration of younger populations and consequently fracturing intergenerational social systems (UNNGOF, 2012; Agree et al., 2005). Compounding this situation is the high HIV/AIDS prevalence (7.1%), which has left many elders to care for orphaned and vulnerable kin or sick adult children and family members (UBS, 2015; Seeley, et al., 2010). Even though Uganda has a National Plan for Older Persons—one of the few SSA countries to do so— that aims to create an environment where older persons can live in a secure and dignified environment that fulfills their needs through various priority areas (e.g. economic empowerment; social

security; food and nutrition; health care; education; psychosocial support; water, sanitation and shelter), the decentralization of government services has resulted in service fragmentation and little to no support for the elderly population (Tam, 2016; MGLSD, 2013).

3.2 Study Setting

The Uganda -SAGE Wellbeing of Older People Study was conducted in a rural area of Masaka district southwestern Uganda, and peri-urban Wakiso district, located in and around the town of Entebbe near Kampala (Figure 3). Since 1989, The Medical Research Council/Uganda Virus research Institute on AIDS (MRC/UVRI) has been conducting HIV/AIDS related epidemiological and clinical studies in this area. Free access to health care is provided through a clinic supported by MRC/UVRL. Most of the population in the study area engage in small scale subsistence agriculture and the all-age ratio of females to males is roughly one to one. Moreover, the majority of older persons have caregiving responsibilities for at least one person (see: Seeley, 2009; Mugisha et al., 2013). Further details of the cohort study are described elsewhere (see: Mugisha et al., 2013; Scholten et al., 2011).

Figure 3.1. Map of Uganda Showing Major Regions in Uganda



4.0 Material and Methods

4.1 Data: The Wellbeing of Older People Survey

This secondary analysis used data from the 2013 Uganda WHO Multi-Country Study on Global Aging and Adult Health (SAGE). SAGE compiles comprehensive longitudinal data on the health and wellbeing of adult populations and documents the aging process across different countries (i.e. China, Ghana, India, Mexico, Russian, South Africa, Uganda). SAGE's second round of data (Wave 2 2013) was collected as part of WHO's World Health Survey. The Ugandan SAGE Wave 2 Study on Global Aging and Health (SAGE) Wellbeing of Older People Study used a multistage stratified cluster sampling design. Further details on the survey methodology can be found elsewhere (World Health Organization, 2013). The 2013 Uganda sample consisted of people aged 50 years and over, selected from existing databases. As recommended by the WHO, the INDEPTH network data for African contexts and other SAGE studies (Ameh et al., 2014; WHO, 2015; Scholten et al., 2011; Gomez-Olive et al., 2013; Calys-Tagoe, 2014), the age of 50 was used as it provides a more accurate representation of the older population**.** In total, 470 people were interviewed: 302 in the rural Masaka District and 168 in the urban Wakiso District. The study participants consisted of older adults who: (1) Have an adult child who died of HIV/AIDS; (2) Have an adult child who is living with HIV and on antiretroviral therapy (ART); (3) Have no child with HIV/AIDS and are not infected with HIV (comparison group); (4) Is HIV infected and on ART for at least one year and (5) Is HIV infected and not on ART. Ethics approval was obtained from the Uganda Virus Research Institute, Science and Ethics Committee and the National Council for Science and Technology, and all study participants provided written/thumb-printed consent to participate in the study.

4.2 Data Collection

The study instruments were adapted from the WHO multi-country Study on global AGEing and adult health (SAGE) and have been used in multiple settings (Kowal et al., 2012; Naidoo et al., 2010). The SAGE household and individual questionnaires cover a wide range of topics related to demographic and household characteristics, both objective and subjective measurements of health and wellbeing and a module focused on caregiving and care receiving. Independent variables cover a wide range and are theoretically relevant to the aging process among the elderly (Calys-Tagoe, 2014; Read et al., 2016; Mugisha, et al., 2013). Satisfaction with several life domains was used to capture the SWB of the elderly.

4.3 Measures

Table 1 presents the outcome and explanatory variables and how they were coded for the analysis. The dependent variable is subjective wellbeing (SWB) among the elderly. To assess SWB, we used the World Health Organization quality of life brief (WHOQOL-Bref) questionnaire, which has been shown to be a valid measure of SWB/QOL among the elderly (Skevington, Lotfy, O'Connel, 2004; Naumann, Byrne, 2004). Questions addressed aspects related to quality of life, life satisfaction and affect in 4 domains: physical, psychological, social relationships, environment, and consisted of 12 questions. Respondents were asked whether they had enough energy or money; whether they were satisfied with their health, self-image, ability to perform daily activities, personal relationships, living conditions etc. SWB scores ranged 0—13.25, whereby higher values mean a worse subjective wellbeing and lower values mean a better subjective. We performed confirmatory factor analysis on these items, using principal-factors extraction and orthogonal varimax rotation. We used four criteria to investigate candidate factors for retention. First, we examined the factor eigenvalues for those factors with eigenvalues greater than 1.0 (Guttman, 1954; Kaiser 1960). In Figure 3, we graph the eigenvalues in

decreasing order to identify the scree, i.e., the portion of the graph where the slope of decreasing eigenvalues approaches zero (Cattell, 1966). Although we did have an explicit test of a single factor solution, the first item had Eigenvalue of 5.19 which explained 52% of the variation, large enough for us to be reasonably confident that all 10 items are trapping on a single dimension. We obtained high overall reliability (α =0.91) and high overall sampling adequacy (kmo= 0.89). The main independent variable is the age of the respondent.

4.4 Analysis

Structural equation modelling was used to examine how the link between age and SWB among older adults is mediated by different structural and intermediary social factors. Guided by the CSDH, structural factors comprised all socioeconomic variables, the demographic variable 'marital status', and the care variable 'receive government assistance'. Intermediary social factors comprised all of the health care variables, all of the care variables, except 'receive government assistance', and the demographic variables 'residence/location' and 'religion'. These multiple potential factors were then tested to examine how they mediate the relationship between age and SWB. Using structural equation modelling provided the total effect, or c path (i.e. association of age with wellbeing), direct effect (i.e. association of age with wellbeing controlling for the mediators), and indirect effects of age with wellbeing through each mediator (indirect effects). This method also allows an examination of the extent to which the mediators independently contribute to an explanation of the association of the focal variable (age) with the outcome variable (wellbeing) as well as a comparison between mediators.

5.0 Results

As shown in Table 3, on average, men, age 65 years [SD=10.30, range 18-75], were slightly older than women 64.21 years [SD=10.35, range 50-101], even though women live longer than men on average. Men reported a higher SWB score 6.94 [SD=2.81, range 2-13.25] compared to women's score of 6.32 [SD=2.75, range 2-12.40]. The majority of respondents provide some care to children; 58% of men and 73% of women provided care for children while only 10% of men and 13% of women provided care for adults. The majority of respondents reported primary education as their highest level of education; 57.23% of men and 57.14% of women. About 63% of men and 12% of women were currently married.

Table 3.0 Descriptive Statistics of Selected Variables

Variables	**Codes**	**Men**	**Women**
		Frequency/Mean (%)	**Frequency/Mean (%)**
Age (Years)		65.00 [SD=10.30, range=50-90]	64.21[SD=10.35, range=50-101]
Subjective Wellbeing		6.94[SD=2.81, Range=0—13.25]	6.32[SD=2.75, Range=0—12.40]
Care Responsibilities			
Care Responsibilities for Children		2.56[SD=2.25, Range 0—11]	3.11[SD=2.15, range 0—10]
Provide Care for Adult			
No	0	159 (90.34)	256 (87.07)
Yes	1	17 (9.66)	38 (12.93)
Receive Family Assistance			
No	0	96 (54.55)	106 (36.05)
Yes	1	80 (45.45)	188 (63.95)
Provide Community Support			
No	0	111 (63.07)	192 (65.31)
Yes	1	65 (36.93)	102 (34.69)
Participate in Group			
No	0	106 (60.92)	176 (59.86)
Yes	1	68 (39.08)	118 (40.14)

Government Assistance			
No	0	166 (94.32)	270 (91.84)
Yes	1	10 (5.68)	24 (8.16)
Receive Remittance from Children			
Yes	0	32 (18.18)	106 (36.05)
No	1	144 (81.82)	188 (63.95)
Number of People Close to (children and adults)		11.92[SD=19.68, Range 0--100]	8[SD=14.45, range 0—98]
Health care variables			
Receive Health Care Last Time Needed			
No	0	11 (6.25)	27 (9.18)
Yes	1	165 (93.75)	267 (90.82)
Length of Waiting time			
Not long	0	106 (60.23)	145 (49.32)
Long	1	70 (39.77)	149 (50.68)
Time to Explain Sickness (HC)			
Always	0	159 (90.34)	244 (82.99)
Not Always	1	17 (9.66)	50 (17.01)
Satisfied with Services (HC)			
Satisfied	0	158 (93.49)	241 (87.96)
Not Satisfied	1	11 (6.51)	33 (12.04)
Socio-economic variables			
Asset Level			
Poor	0	43 (24.43)	114 (38.78)
Middle	1	63 (35.80)	93 (31.63)
Rich	2	70 (39.77)	87 (29.59)
Financial Status			
Bad	0	109 (63.01)	201 (68.37)
Good	1	64 (36.99)	93 (31.63)
Financial Improvement (last 3yrs)			
Worse	0	117 (66.48)	192 (65.31)
Better/same	1	59 (33.52)	102 (34.69)
Currently			

Employed/Working			
No	0	30 (17.05)	61 (20.75)
Yes	1	146 (82.95)	233 (79.25)
Educational Level			
None	0	18 (10.40)	70 (23.81)
Primary	1	99 (57.23)	168 (57.14)
Secondary	2	47 (27.17)	38 (12.93)
Higher	3	9 (5.20)	18 (6.12)
Demographic factors			
Marital Status			
Not Married	0	65 (36.93)	258 (87.76)
Married	1	111 (63.07)	36 (12.24)
Residence/Location			
Urban	0	55 (31.25)	113 (38.44)
Rural	1	121 (68.75)	181 (61.56)
Religion			
Catholic	0	105 (60.00)	182 (61.90)
Protestant	1	42 (24.00)	62 (21.09)
Islam	2	18 (10.29)	21 (7.14)
Other	3	10 (5.71)	29 (9.86)
Total		**176**	**294**

Table 3.1: Determinants of subjective wellbeing sorted by gender

Variables	Men only	Women only	Total sample
Age (Years)	0.41[0.27—0.54]***	0.44[0.33—0.54]***	0.42[0.34—0.50]***
Provide Community Support	-0.22[-0.39— -0.06]***	-0.26[-0.39— -0.13]***	-0.24[-0.34— -0.14]***
Care Responsibilities for Children			
Participate in Group	-0.16[-0.32—0.01]*	-0.28[-0.41— -0.16]***	-0.23[-0.33— -0.13]***
Number of People Close to	-0.13[-0.30—0.04]	-0.13[-0.27— -0.002]**	-0.15[-0.26— -0.04]***
Childcare Responsibilities	-0.12[-0.28—0.05]	-0.11[-0.24—0.03]	-0.08[-.018—0.02]
Provide Care to Adults	0.05[-0.11—0.23]	-0.09[-0.23—0.04]	-0.03[-0.14—0.07]
Government Assistance	-0.04[-0.22—0.13]	-0.29[-0.42— -0.16]***	-0.19[-0.29— -0.08]***
Family Assistance	-0.14[-0.31—0.02]*	0.02[-0.11—0.16]	0.003[-0.10—0.11]
Receive Remittance from Children	-0.08[-0.26—0.08]	0.01[-0.12—0.15]	0.02[-0.08—0.13]
Receive Health Care Last Time Needed	0.10[-0.07—0.27]	-0.16[-0.29— -0.03]**	-0.08[-0.19—0.02]
Length of Waiting Time	-0.05[-0.23—0.12]	0.11[-0.03—0.24]	0.06[-0.04—0.17]
Time to Explain Sickness (HC)	0.04[-0.13—0.22]	0.13[-0.01—0.26]*	0.12[0.02—0.23]**
Satisfied with Services (HC)	-0.09[-0.26—0.08]	0.12[-0.01—0.25]*	0.07[-0.03—0.18]
Education	-0.31[-0.48— -0.15]***	-0.23[-0.36— -0.09]***	-0.29[-0.39— -0.19]***
Not Currently Working	0.19[0.03—0.35]**	0.28[0.16—0.39]***	0.26[0.17—0.35]***
Asset Level	-0.33[-0.49— -0.17]***	-0.26[-0.39— -0.13]***	-0.30[-0.40— -0.20]***
Good Financial Status	-0.47[-0.61— -0.32]***	-0.44[-0.56— -0.33]***	-0.45[-0.54— -0.36]***
Financial Improvement (last 3yrs)	-0.40[-0.55— -0.25]***	-0.46[-0.57— -0.34]***	-0.42[-0.52— -0.33]***
Gender (female)	N/A	N/A	0.21[0.11—0.32]***
Currently Married	-0.25[-0.42— -0.08]***	-0.12[-0.25—0.02]*	-0.26[-0.36— -0.16]***
Rural Residence/Location	-0.001[-0.17—0.17]	-0.04[-0.16—0.08]	-0.04[-0.14—0.06]
Religion	0.09[-0.08—0.26]	0.01[-0.13—0.14]	0.05[-0.06—0.16]
Model fit			
RMSEA			0.097
AIC			31368.11
BIC			31833.224
CFI			0.607
TLI			0.558
SRMR			0.084
CD			0.930

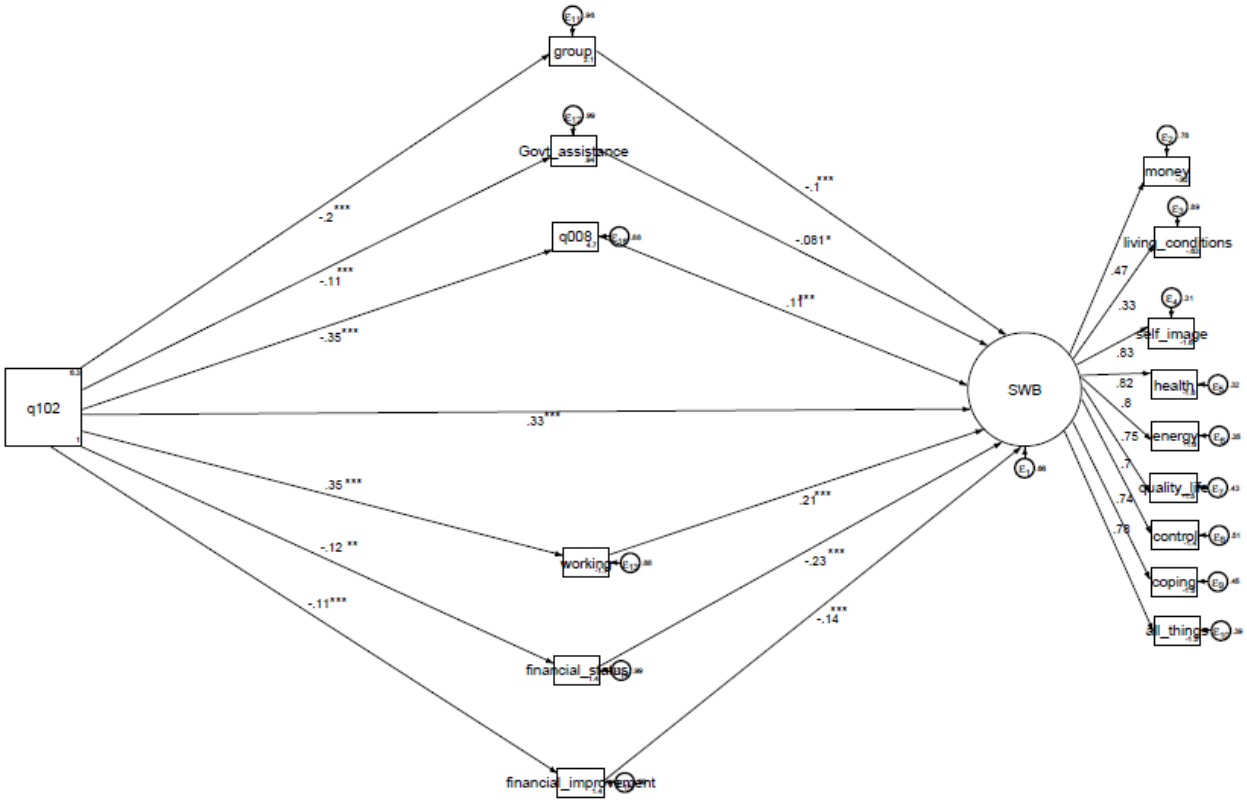
*P < 0.1; **P < 0.05; ***P < 0.01. Confidence intervals are presented in brackets.
Note: Positive values represent a negative association and negative values represent a positive association.
(e.g. Higher values mean worse subjective wellbeing, whereas lower values mean better SWB)

At the first stage of the analysis (Table 3), we employed linear regression to examine the links between age and SWB controlling for only demographic factors. The results show that age had a strong and negative association with SWB ($\beta = 0.42$, $p = .01$). Among the demographic factors, gender, marital status and asset levels were significantly associated with wellbeing, albeit with positive and negative affects. When the first group of factors (social network and care responsibility factors) were controlled for, the association between age and SWB remained significant ($\beta = 0.38$, $p = .01$) although the effect size reduced. Factors such as providing community support, group membership and the number of close relatives were significantly and positively associated with both age and SWB. However, care giving responsibilities, such as providing care for an adult or a child were only negatively associated with SWB. The association between age and subjective wellbeing remained robust ($\beta = 0.42$, $p = .01$) after we controlled for health care, social-economic and financial variables in the final model (see: Figure 3.2). Subsequent mediation testing (Preacher & Hayes, 2008) revealed that the direct effect (c) of age on wellbeing was significant ($\beta = 0.33$, $p = .006$). Six of the indirect paths were statistically significant [non-significant results are not displayed in the figure] and had positive effects but did not completely mediate the negative relationship between age and SWB. These include social network variables, such as belonging to a group ($\beta = 0.02$, $p = 0.01$), and receiving government support ($\beta = 0.009$, $p = 0.01$). Socioeconomic indirect paths include currently working ($\beta = 0.07$, $p = 0.01$), and better financial status ($\beta = -0.03$, $p = 0.01$), while none of the demographic factors were signifigant. This suggests that the effects of age on wellbeing operates through its indirect effects on social support, socioeconomic factors as well as functional ability in terms of undertaking work.

We further disaggregated our analysis by gender in order to examine the gendered differential effects of the aging process (see: column 2 and 3 in Table 3.1). The significant factors positively

associated with men's SWB include: providing support to others, education, working status, asset level, good financial status and financial improvement over the last 3 years. However, among older women, the significant factors positively associated with SWB include younger age, providing community support, participating in group activities, and higher number of close relatives, government assistance and all of the socio-economic variables.

Figure 3.2: Indirect Pathways Between Aging and Subjective Wellbeing in Central Uganda



SWB = subjective wellbeing in decreasing order, q101= age, q008=district of residence, q112=religion, q101=gender

6.0 Discussion

The aim of the study was to examine how the relationship between age and SWB were directly and indirectly mediated by a range of intermediary social and structural determinants of SWB including

social network and care relations, socioeconomic factors and demographic factors as well as to examine how these factors varied by gender. Motivated by the dearth of research on the associations between aging and SWB in Uganda and elsewhere in SSA, we consider this study and its findings timely and important for three reasons. First, there is limited discourse towards the wellbeing of elderly populations in SSA, despite inequalities in SWB being identified as a leading global public health concern and significant growth in this segment of the SSA population (WHO, 2016; 2015). Secondly, considering the CSDH framework continues to expand and engage different contexts and populations, with its veracity continuously tested (WHO, 2015; Solar & Irwin, 2010), this study is carefully designed to contribute to the expansion of the CSDH framework by examining elderly populations, subjective wellbeing and gender in the deprived context of Uganda—all unexamined issues in the social determinants of health and wellbeing literatures (Sadana et al., 2016; WHO, 2016; Beard & Bloom, 2016). Lastly, in the specific case of Uganda, considering the ineffectiveness of the National Plan of Older Persons, the results highlight important pathways that could mitigate inequalities in SWB in old age. We discuss our findings accordingly.

The results add to the literature from high income contexts that reveal a direct relationship between age and SWB (Pinquart, 2000; Wes et al., 2012), but highlights contrary to high income contexts, in Uganda, old age is directly and negatively associated with SWB. This not only expands insight into the age-SWB relationship in the SSA context but also supports calls for age itself to be considered as a determinant of health and wellbeing (Arber, 1993; Aboderin, 2010). Moreover, examining how the age-SWB relationship was mediated by a range of theoretically relevant factors brought forth new knowledge on the social-structural determinants of elderly wellbeing in SSA.

Foremost, the results reveal that intermediary social determinants, such as social cohesion and social support (e.g. the provision of community support, group participation) and structural determinants (e.g., education, asset level, employment status, gender, and good financial status) are all important predictors of SWB in old age. In terms of intermediary factors, the positive mediating influence of social networks (e.g. community support, group participation) on SWB in old age supports findings from both high and low-income countries that highlight participation in community activities is strongly related to SWB, likely due to elder's need for social support and engagement in old age (Guyre, 2008; Howley et al., 2015; Tangachu & Potter 2016). Yet, given the paucity of formal social support in SSA, the results suggest that the provision of informal support through personal networks may be even more important (for physical and psychosocial health) than other contexts (Perkins, Subramanian, & Christakis, 2015). Social supportive networks in SSA contexts not only act as social buffers and support for interpersonal connections in which to obtain joy, satisfaction and happiness (Thoits, 2001), they also mitigate the deleterious impacts of socioeconomic inequalities as they provide a means to obtain basic necessities including food, water and clothing (Narayan, 2002).

Examining how these relationships vary by gender however, exposed notable variations. The findings reveal that community social support and group participation more strongly and positively mediated the age-SWB relationship for women (0.22; 0.28 respectively) compared to men (0.22: 0.16 respectively). This is important as it suggests older women derive more positive affects from participating in a group and providing community support, which may help to mediate some of the negative interactions between age and SWB. This finding aligns with prior work that shows since women's roles are tethered to the household, they are better able to form strong ties and groups with other community members that afford them economic and social security; while men typically have weaker social ties as a

result of working outside of the home and community (Mudege, et al., 2009; Harling, Perkins, Gómez-Olivé et al., 2017). Considering research on older adults' social networks in LMICs, particularly SSA is limited (Harling et al., 2017) further work needs to examine how different types of social networks are associated with the wellbeing of older men and women in SSA (Berkman, Krishna, 2014; Perkins et al., 2015).

In terms of structural determinants, the results reveal economically deprived elders are more likely to have lower evaluations of SWB compared to their economically advantaged counterparts, consistent with other literature (see: Dannefer, 2003; Pinquart, 2000; Jivraj & Nazaroo, 2014). As one could expect, poorer evaluations of SWB are concentrated among individuals with lower socioeconomic status in terms of being unemployed, low wealth levels and worsening financial status. This not only underscores the likely cumulative impacts of inequalities experienced over the life course, but also points to important inequalities in SWB, even within this relatively homogenous population where poverty is rife (see: Sandana, et al., 2016). Indeed, the more financially stable an older Ugandan feels, the higher levels of SWB they report, akin with other studies (Diener et al., 1999; Pinquart, 2000). The present analysis however goes beyond existing research to show that socioeconomic position has a strong and negative—albeit mediated— influence on SWB which also varies by gender.

Gender variations in the structural determinants of SWB reveal important contrasts. The findings show that structural determinants such as education and asset level more strongly and positively mediate the age-SWB relationship for older men (0.31; 0.33 respectively) compared to women (0.23; 0.26) suggesting that older men derive more positive affects from having higher education and financial asset levels. This may be due to the fact that Ugandan males attain higher education and income levels compared to their female counterparts (UBS, 2015; 2012) and as a result, may have a more influential

role on men's SWB evaluations. This is similar to results from Ethiopia which found literacy rates were only associated with male but not female old age survival, suggesting gender differences in decision making power place men in stronger positions to enjoy the benefits of literacy (Fantahum et al., 2009). Our results may tell a similar story such that the gendered divisions of roles and responsibilities contribute to cumulative (dis)advantages across the life course and become reflected in women's lower evaluations of SWB. Since disparities in old age SWB reflect accumulated disadvantage across various spectrums (Beard & Bloom, 2015), it is important to further analyze how economic inequalities mediate the relationship between old age and SWB by gender, especially in Uganda's Central Region where inequalities in income continue to grow (Mukwaya & Bamutaze, 2012).

An interesting finding was the significant positive pathway between marital status—a structural determinant— and SWB, but not with aging. Though a large body of work from high income countries highlight the importance of marriage for positive evaluations of SWB in later life (Mroczek & Spiro, 2005; Diener et al. 2000; Yang 2008), our findings shed light on the fact that irrespective of age, marriage in itself is positively and directly associated to SWB. Important gender variations, however, exist in terms of the positive effects of marriage in older age. The findings highlight that marital status for men is more than twice as strong and positively associated with SWB (0.25) compared to women (0.12). On one hand, this may suggest that since men in East Africa are found to have harder times coping with the aging process due to the loss of identity and employment status upon retirement, female spouses may cushion the aging process for men as they provide both psychological and livelihood support and facilitate opportunities for social connection (Mudege et al., 2009). On the other hand, the lower importance of marriage for women's SWB may be due to women's higher degree of self reliance in old age and ability

to formulate social relations outside of the home, hence making them less dependent on a spouse in later life (Mudege et al., 2009; Amuyunzu-Nyamongo & Ezeh, 2005). Considering no research has examined how marital status mediates the old age SWB relationship in SSA or explored how this relationship varies by gender, this work extends current literature and underscores the need for more work examining the intersections of marriage, gender, aging and subjective wellbeing.

Furthermore, the significant negative pathway between caregiving responsibilities—an intermediary social determinant— and SWB, but not with age, is a unique aspect of the findings. The similar strength of association between caregiving for a child and SWB for women (-0.11) and men (-0.12) may speak to the fact that both men and women provide caregiving responsibilities that negatively affects their SWB, possibly through economic, social and physical costs associated with additional responsibilities (Mudege & Ezeh, 2009). This, however, does not make it any less stressful for the elderly, given these caregiving responsibilities are assumed during periods of life when elders have inadequate finances and limited physical capabilities. This finding supports studies from other SSA countries that suggest caregiving itself may lead to increased physical and somatic complaints like fatigue, insomnia, anxiety, and stomach aches (Knodel, Watkins, VanLandingham, 2003), and create psychosocial implications, like stress (Ice, Yogo, Heh, Juma, 2009), especially where care is being provided with few financial resources (Akintola, 2004; Deaton & Stone 2013), but also runs contrary to other studies that suggest caregiving has positive outcomes for older people as it builds obligatory exchanges, strengthens family ties and provides a means to access other types of care for themselves, like assistance with household chores or other daily tasks (Schatz & Ogunmefun, 2007; Kasedde et al., 2014). More work is

needed to tease apart the bi-directional relationships between SWB and care giving-receiving among both older men and women in SSA.

The finding that being a woman— a structural determinant—was directly and negatively associated with SWB is revealing and consistent with literature that finds SSA to be the only world region where women (ages 25+) have lower SWB levels compared to their male counterparts (Ghraham & Chaootpy; Calys-Tagoe, 2014). The negative direct association between being a woman and SWB may speak to the current state of gender rights, norms and expectations on the continent (Graham et al., 2013; Graham & Lora, 2009) where women continue to be disadvantaged compared to their male counterparts in both education and wealth (UNDP, 2016). Considering SSA has the highest rates of global gender inequality (UNDP, 2016), the cumulative impacts of gender inequality over the life course are likely exacerbated in old age, making being female a direct predictor of negative wellbeing in old.

Comparing the mediating social and structural factors between age and SWB by gender, we found that in addition to the aforementioned factors, older women's SWB is significantly and positively mediated through intermediary social determinants including their number of close contacts, various health care factors (e.g. health care receipt last time needed, had time to explain sickness at the health facility, and satisfaction of health care services), and the structural determinant— receipt of government assistance. The importance of close contacts for women may be due to that fact that they live longer on average, are less likely to remarry in old age compared to men, and as a result derive happiness and support from the connections with close contacts (Oksuzyan et al., 2009; Luy & Minagwa, 2015). The importance of government assistance for women's SWB may speak to the fact that since women in Uganda have less access to formal employment during their lives and consequently, no access to

pensionable income compared to men, the receipt of government assistance likely provides financial assurance, potentially alleviating (some) stressful experiences in later (Nyirenda et al., 2012). The significant and positive impact of health care factors for older women's SWB may underscore elderly women's greater health challenges compared to men—similar to other studies conducted in Uganda (Sholten et. al., 2011; Nyirenda et al., 2012), or may be emblematic of women's, on average, greater health seeking behaviour compared to men (Galdas, Cheater & Marshall, 2005; Addis, Mahalik, 2003).

Examining mediating factors specially associated with older men's SWB reveals that in addition to the aforementioned factors, the intermediary social determinant— receiving family assistance— was significantly and positively associated with enhanced SWB (-0.08). The importance of family assistance for men may underscore that in contexts where men get squeezed out of work in the formal economy or experience declines in their ability to remain engaged in the informal economy, receipt of family assistance likely provides financial stability and psychological comfort (Mudege & Ezeh, 2009).

Despite the relevance of our findings, there are a number of limitations worth noting. First, we are unable to make any causal inferences between any of our independent variables and SWB due to the cross-sectional nature of the data. Second, the respondents were selected from existing cohort studies in the area which could potentially introduce a selection bias. Yet given the wide coverage of the study and clinics from which the samples are drawn, it is possible to have provided a fairly representative picture of older people living in the Entebbe area. Third, the use of self report health and SWB measures have limitations and may introduce bias. However, the use of the WHOQOL-Bref gives confidence that these results provide good insights into factors affecting older people's SWB. Moreover, the measures used in the study have been well tested in a wide range of sociocultural and economic contexts (Kowal et al., 2010) and are considered robust measures of SWB.

7.0 Conclusion

In the context of population aging and subjective wellbeing, this study confirms that intermediary social determinants of subjective wellbeing (SWB), social cohesion and social support, as well as structural determinants of SWB as explained by the CSDH are important indicators. The findings however show that that intermediary social determinants of SWB are the most important determinants of SWB for women, whereas structural determinants are the most important determinants of SWB among men in the Central Region of Uganda. Examining these determinants allows us to address some of the recent calls for research on the nature of the relationship between socio-economic position and wellbeing among older adults (Read et al., 2016) and adds to the sparse literature on gender differences in the aging process. Likewise, examining the social and structural pathways through which inequalities in SWB emerge in Uganda provides a way in which to begin conceptualizing how disparities in an elders' socio-economic position are shaped by broader social, economic and political contexts which mediate and exacerbate outcomes of SWB (Solar & Irwin, 2010; Wilkinson & Marmot, 2003; Sadana et al., 2016). In doing so, this research adds to the SDH literature revealing how the socioeconomic and political contexts of Uganda configure and produce socioeconomic hierarchies among elderly individuals, that are indeed reflected in an elder's gender, location, educational status, occupation, wealth, and social class (Solar & Irwin, 2010; Sadana, et al., 2016). Moreover, this research is to the best of our knowledge, the first to extend the CSDH framework to consider elderly populations, subjective wellbeing and geographical contexts of SSA.

Overall, this paper shows that age and SWB are directly and negatively associated in Uganda, but the relation is mediated by a range of social and structural factors that vary by gender. The findings reinforce the importance of considering the multidimensional nature of wellbeing (Stiglitz et al., 2009;

Deaton, 2013) and strengthens the importance of studying indirect pathways to reduce inequalities in SWB among older global populations, especially in deprived LMIC contexts (WHO, 2015). Considering wellbeing varies over space and time (Atkinson, 2011, 2013; Schwanen & Wang, 2014), this research underscores the importance of considering the diversity of people's life experiences and their interrelations within different structural systems (i.e. social, cultural, political, economic) (Stiglitz et al., 2009; Tomaney, 2015). Equally, this research sheds light not only on how enduring inequalities tend to shape life chances within the population as a whole, but also how inequalities differ within groups and by gender. Since gender is a mix of social and biological factors that interact to shape accress and avaliability to resources across the life course (Doyle, 2000), exploring gendered differences in wellbeing during old age is important for both policy and practice (Graham & Chattopadhyay, 2013). Though some research explores gendered experiences of aging in LMIC contexts, the common tendency to focus almost exclusively on female disadvantage in the social determinants of health and wellbeing may be detrimental to supporting older people most in need (Knodel & Ofstedal, 2003). Future work examining inequalities in the determinants of health and wellbeing among and between both men and women in Sub-Saharan Africa is therefore critical.

Given that older populations are on a significant rise in SSA (UNDESA, 2015), this study provides an opportunity to understand the links between aging and SWB while also pointing to potential policy avenues. Uganda's National Policy for Older Persons aims to support, mobilize and empower older persons' participation and economic growth, yet little knowledge or attention exists towards appropriate strategies to reduce inequalities in elders SWB (MGLSD, 2013). Guided by these findings, aging initiatives in Uganda that focus on the social determinants of SWB including age and gender inequalities are imperative. There is the need for national approaches that prioritize the provision of a stable basic

income and justified employment opportunities to improve livelihoods and reduce economic insecurity related anxiety, stress and depression (Beard et al., 2016). In addition, interventions that enhance social opportunities, support systems and amenities at both the village and district levels is critical in order to promote fellowship, cohesion and integration, as well as ensure access to requisite health and social services for the elderly (Sandana et al., 2016; WHO 2015; 2016). Ultimately, concerted government attention is needed to address inequalities in elderly wellbeing and meet the targets set by the Global Strategy and Action for Aging and Health.

Chapter Four

Manuscript # 2: "It's survival of the fittest": Ageism, Health and Wellbeing in Uganda

Rishworth, A., Elliott, S.J. "It's survival of the fittest": Ageism, Health and Wellbeing in Uganda.

Geoforum (under review).

Abstract:

Sub-Saharan Africa (SSA) is the fastest aging global region. Yet relative to its younger population, the elderly are only a small fraction of the total population. (i.e. 8% above 60 years). This means most of the elderly are marginalized in resource allocation, distribution, and development strategies as governments are often more focused on providing for the needs of the region's young (i.e. 65% below 25 years). The elderly in SSA also have the highest global burden of disease, disability, and unhappiness. While the geography of aging has enhanced knowledge on the intersections of aging, environment, health and wellbeing, there is a paucity of work examining these relationships in Uganda SSA. To address this gap, focus groups and key informant interviews were conducted to examine place-specific drivers of health and wellbeing among elderly individuals. Drawing on political ecology of health, the findings reveal that discriminatory and stereotypical beliefs at both the institutional and interpersonal levels have direct and indirect effects on aging bodies, in multiple domains, that become embodied in deleterious physical and psychosocial health and wellbeing. Overall, the findings underscore that the health and wellbeing of elders in SSA is an embodiment of changing socio-cultural relationships, inequitable resource distribution, and fluctuating environmental conditions rooted in place.

Keywords: Aging, health, wellbeing, place, Uganda, Sub- Saharan Africa, geography of aging

1.0 Introduction

Sub-Saharan Africa (SSA) is the fastest aging global region. By 2050, the number of older people (60+ years) will increase 13-fold from 4.6 million to 215 million – 70 million more than Northern and Western Europe combined, and 40 million more than North America (UNDESA, 2015). Yet, this aspect of SSA's demography has been given little attention in public or policy debates. Instead, the overwhelming focus remains on children and populations of reproductive age. Indeed, over half of the population is below 25 years of age (i.e. 65% below 25 years, 8% above 60 years), making it also the youngest region in the world (UNDESA, 2015).

This demographic composition has important consequences for the allocation and distribution of resources, as well as the creation of policies for the continent's older population. Only 10 of SSA's 46 countries have adopted national policies on aging, established aging organizations, or included aging-related issues in government policies (WHO, 2017). Across the continent, most of the elderly population are marginalized in the region's broader development strategies as governments are often more focused on providing socioeconomic opportunities for the region's young (Drummond, Thakoor, Yu, 2014). As a result, much of the elderly population lack access to social security, health care and legal protection (WHO, 2017). This is on top of pre-existing challenges ― frailty, immobility, immune compromise, etc. ― that often come with increased age (WHO, 2015). Even sill, in parts of SSA, large numbers of the elderly are fostering children, providing parental care and psychosocial support (Schatz, Madhavan, & Collinson, 2015). A review of 40 SSA countries found that between 24%-64% of elderly individuals foster of orphaned and vulnerable children (Monasch & Boerma, 2004).

Within the geographic gerontological literature, a growing body of work examines the "strong reciprocal relationships between older people and their social and physical environments, and their health

and wellbeing" in high-income contexts (Canada, United States, Australia, New Zealand, Britain) (Wiles, 2009, pg. 664). Studies from New Zealand underscore the importance of symbolic and emotional attachments to homes, neighbourhoods, and communities for health and wellbeing in old age (Wiles, Leibing, Guberman., 2012), whereas those from rural Canada highlight the importance of community volunteer opportunities, services, and supports for health and wellbeing maintenance (Skinner & Joseph, 2007). This literature undeniably enhances knowledge on the relationships between older people, the social and physical places they inhabit (e.g. homes, community living, natural environments, infrastructure), along with their implications for health and wellbeing (see: Finlay, 2015; Coleman & Kearns, 2015; Wiles et al., 2009). Yet, much of this work tends to overlook the multiscale processes that shape aging in place, along with the ways aging in place plays out in the SSA context ― even though place may present greater problems for more vulnerable groups aging in changing or undesirable settings (Means, 2007; Skinner, Cloutier, Andrews, 2015)

Outside the geographic literature, however, a growing number of aging studies address topics spanning patterns of disease; health and function; living arrangements; family and intergenerational relations; work; migration patterns; and experiences of (health/social) care receipt and provision (see: Aboderin, 2016). These studies reveal that older populations in SSA have the greatest burden of disease (infectious, chronic), disability (from geriatric conditions), and unhappiness; yet have little availability and access to health care and are relatively disadvantaged compared to young adults (29-59 years) in both wealth and health (Suzman, 2010; Steptoe & Deaton, 2015). Specifically in the Ugandan context, existing aging literature explores impacts of HIV/AIDS (Schatz, Seeley, Negin, et al., 2019; Rutakumwa, Zalwango, Richards et al., 2015; Seely, Ekoru, 2010; Seeley, Wolff, Kabunga, et al., 2009), caregiving/care-receiving (Kasedde, Doyle, Seeley & Ross et al., 2014; Mugisha, Schatz, Seeley, et al.,

2015; Rutakumwa, Zalwango, Richards., 2015; Schatz, Seeley, J., Negin, et al., 2018a), loneliness and vulnerabilities (Nzabona, Ntozi, Rutaremwa, , 2016; Stewart, Dall'Olio, Eberhard, et al., 2014), health care seeking behaviours (Schatz, Seeley, Negin, & Mugisha 2018b; Wandera, Kwagala, & Ntozi ., 2015), along with disability, physical and self reported health (Maniragaba, Nzabona, Asiimweet al., 2019; Kinyanda, Kuteesa, Scholten et al., 2016; Wandera, Ntozi & Kwagala, 2014; Wandera, Golaz, Kwagala, 2015a; Wandera, Kwagala, & Ntozi, 2015b).

These studies reveal older populations in Uganda suffer considerable burdens of depression and loneliness (Kinyanda et al., 2015; Nzabona et al., 2015), experience high rates of disability (Wandera et al., 2014) and rate their health poorly (Wandera et al., 2015b). Reasons for these health problems are complex and range from interpersonal, societal and structural scales. Some of this literature attributes elders' poor health to a loss of social support and connections, family conflict and disruptions, and rural-urban migration of young (Nzabonam et al., 2015; Maniragaba et al., 2019; Golaz, Wandera, Rutaremwa, 2015), whereas others point to declining socioeconomic status, household wealth, and a lack of pensions schemes (Wandera et al., 2015b; 2014; Kinyanda et al., 2015). Even still, others explain these health disparities are due to negligent health systems— characterized by shortages of medicine, rude staff, and personnel deficiencies (Schatz et al., 2017; Mugisha et al., 2017).

While these studies identify a number of important driving factors of health that operate at various scales, little work theorizes how these drivers work in tandem to influence elders' health and wellbeing outcomes. Moreover, there is a paucity of work explicitly incorporating the physical environment into these health explanations. We begin to address this gap by examining how political-economic, socio-cultural, and environmental drivers shape health and wellbeing outcomes for older individuals. We focus our attention on a case study of Uganda to qualitatively examine how particular

drivers inform health and wellbeing outcomes for older individuals. In so doing, we enhance conceptual understandings of the multiscale socioecological drivers of health and wellbeing in Uganda and advance the geographies of aging literature by providing empirics from an SSA context.

The paper begins with a discussion of the theoretical framework informing the research process and study context. It then describes the methods used and presents key results. Following is a discussion that reveals how discriminatory and stereotypical beliefs at both institutional and interpersonal levels have direct and indirect effects on aging bodies in multiple domains—sociocultural, political economic, environmental— which become embodied in a variety of deleterious physical and psychosocial health and wellbeing outcomes. In so doing, the findings underscore how the health of elders is both a discursive and material struggle, shaped by unequitable resource distribution, changing socio-cultural relations, and fluctuating environmental conditions that intersect and become embodied in place. The paper concludes with an assessment of how these findings can inform policy and practice**.**

2.0 Political Ecology of Health

This research draws on political ecology of health (PEH). Underpinned by conceptualizations of political ecology (Peet & Watts, 2004; Robbins, 2004), PEH examines health in the context of broader social and economic dynamics (King, 2010). As an analytic framework, PEH focuses on the socio-political determinants of health (e.g. historical factors and development policies), while simultaneously rooting analysis in the ecological dynamics of place (King, 2015; Neely, 2015). In this regard, PEH provides a multi-scalar analytic framework to examine the dialectic and co-determining ways health is embedded within socio-ecological systems at the local, national, and international levels (King, 2015). This moves analysis beyond the proximate causes of health concerns to reveal how health is rooted in

complex material processes, biophysical environments and political discursive practices of a place (King, 2015; King, 2010; Robbins, 2004).

Since Mayer's call for an increased uptake of political ecology frameworks (1996), PEH has transitioned from a focus on disease patterns and vulnerabilities to more dynamic and integrated perspectives of long-term health, wellbeing and individual agency (King, 2015). Empirically, PEH traces the interaction of political economic processes with ecosystem change and related health outcomes, while illustrating how these interactions are understood and assessed by various institutions, practitioners and affected groups (King, 2010; King & Winchester 2018). For instance, Mkandawire et al. (2013) contextualize hepatitis B viral infections within the context of Ghana to illustrate how existing sociocultural knowledge regimes contribute to the spread of disease by failing to understand the realities of local populations. King & Winchester (2018) link HIV management in South Africa to social dynamics, livelihood patterns and regional political economies to reveal how health is mediated by existing socio-cultural institutions and spatial economies that differentially impact populations in biophysical systems. Even still, Nyantaki et al., (2016) situates urban agricultural practices within Ghana to highlight that these practices not only have financial and environmental costs, but also social consequences that become embodied in long-term health outcomes. A common thread running through these cases is the complex interactions between environment and human health, and the mediating role of local historical place-based dynamics, and state policies (see: Robbins, 2004).

Recent work in PEH draws from feminist perspectives to begin "examining broadened conceptions of health and environment and how they interlink with socio-economic class, race, gender and ethnicity" (King, 2015, pg 347; Sultana, 2012). Sultana (2012), for instance, details the ways people cope with and respond to water poisoning in India. She highlights that while water poisoning is

influenced by broader social processes, histories and policies, the health impacts of water poisoning are further compounded by gender, class differences, and environmental heterogeneities that produce uneven health outcomes. Elucidating how the health of population (sub)groups interlink with larger socio-ecological systems provides a more variegated understanding of how resource allocation and distribution across scales differentially construct health outcomes for various population segments.

While PEH has expanded to more forcefully engage diverse population subgroups (e.g. women, class, race), no work to date has considered how old age acts as another important category of difference (Allen, 2016). In the context of SSA where demographic groups compete for critical resources, examining how old age shapes access and control of resources necessary for daily life is critical in order to fully understand health and wellbeing formation. With calls for more work to "interrogate the multifaceted intersections between social and ecological systems in producing vulnerabilities and possibilities for health" among diverse population groups (King, 2015, pg. 351), we draw on PEH to examine how the health and wellbeing of aging bodies is produced in everyday social, ecological and politicized environments in Uganda's Central Region.

3.0 Context: Uganda's Central Region

Uganda is home to approximately 42.8 million people, 55% of which are under the age of 18 and 2.7% over the age of 60, making it the second youngest country in the world (UNDESA, 2015) (Figure 4). Life expectancy is currently 62.3— a 18-year difference between high income countries, due in part to the country's high HIV/AIDS prevalence (7.2%) and poor public health measures (WHO, 2015; UBOS, 2016). Despite this, its older population (60+ years) is projected to grow almost five-fold, from 1.3 million in 2010 to 5.5 million by 2050 (MoGLSD, 2012).

Uganda's population is divided between 4 administrative regions, and 127 districts (UBOS, 2016). The Central Region houses the largest population (27%) and is coterminous with the Kingdom of Buganda— one of the ancient monarchies constitutionally recognized in Uganda. While the country has reduced poverty following a series of structural adjustments and government decentralization, inequality within and between regions and subgroups has increased (Hery, 2016). The Central region has the highest income inequality (Gini coefficient 0.424), with the poorest living in rural locations. Of all demographic groups, the elderly are the poorest (64% below the poverty line), with 80% residing in rural areas (MoGLSD, 2012). Of all SSA countries, Uganda has among the lowest share of the population above legal retirement age receiving a pension (Stewart, Dall'Olio et al., 2014). Approximately 98% have no form of pension or social security/insurance (MoGLSD, 2012). While the government has implemented a pilot non-contributory social pension scheme (i.e. the Social Assistance Grants for Empowerment (SAGE)) funded by international donors (see: Merttens, Sindou, Lipcan et al., 2016), this program covers only 43 of the 127 districts and provides limited support to few seniors in each district (Stewart et al., 2014).

As such, 85% remain engaged in informal employment (agriculture, trade, mining, fishing) in order to secure money and personal sustenance (Stewart, Dall'Olio et al., 2014). Around three quarters (72%) of Uganda's population engage in agricultural production as their primary source of livelihood, most of which is subsistence rather than commercial (FAO, 2018). Yet, due to the 2016 La Niña, intensified heat waves and sporadic rains severely restricted food production and agricultural yields (FAO, 2018; IPC, 2017). This is exacerbated by additional changing climatic conditions, such as increased droughts, floods and variable precipitation cycles, which have increased household vulnerability to food insecurity, particularly in rural localities (FAO, 2018). The Central Region currently

has the highest rates of deteriorating dietary diversity and malnutrition in the country, with the elderly particularly vulnerable (IPC, 2017). Due to poor nutrition, older persons are already predisposed to emaciation and chronic energy deficiency, which makes the impacts of climate change particularly concerning (MOGLSD, 2012).

At the same time, the country continues to see increasing rates of urbanization, with the greatest growth in Kampala, Central Region (Henry, 2016). Younger populations in the Central Region are progressively migrating to urban centers for employment opportunities, thereby weakening social networks that have traditionally provided protection for elderly (Mukwaya, Bamutaze, 2012). Approximately 15% of the households in the country are headed by an elderly individual, of whom almost 72 % have responsibilities caring for children and the sick (Stewart, Dall'Olio et al., 2014).

These changes are occurring at a time when the elders' physical and mental health is declining. Elderly in the Central region have the highest rates of disability and are less likely to have good physical health compared to the elderly in other regions (Maniragaba et al., 2018; Ssewanyana, Kasirye, 2012). Despite this, they lack access to health services, geriatricians, and essential medications (Schatz et al., 2018b). The doctor to patient ratio is estimated at 1:24,725— 20 times higher than the WHO's recommendations— and only one hospital per 2.4 million people provides geriatric care (MOH, 2014). Even when older people do access a health facility or hospital, Uganda's National Minimum Health Care Package does not include drugs that treat diseases common among elderly populations (i.e. non-communicable diseases such as hypertension, stroke, diabetes, heart diseases, weak bones, arthritis, urinary incontinence) and communicable diseases such as malaria, STIs, upper respiratory diseases (MoGLSD, 2012).

While Uganda has a National Policy for Older Persons (2009) and a National Council for Older Persons (2013) that aspires to create a "society where older persons are living in a secure and dignified environment that fulfills their needs and aspirations" (MoGLSD, 2012, pg. 6) through various priority areas (e.g. economic empowerment; social security; food and nutrition; health care; education; psychosocial support; water, sanitation and shelter), the government has yet to implement or coordinate programs and policies for the elderly (MoGLSD, 2012; Stewart, Dall'Olio et al., 2014). Rather, government interests seem to be aligned with capitalizing on the large youth demographic by prioritizing investment and policies that ensure the youth population is skilled, productive and capable of accelerating social transformation (NPA, 2014). It is within this context of existing structural inequalities and rapidly changing environments that knowledge of social, environmental, and political-economic drivers are examined, and implications for health and wellbeing are explored.

Figure 4.0 Uganda and Uganda's Central Region

4.0 Methods

4.1 Research Approach

To explore how elders' health and wellbeing is shaped vis-à-vis the environment, we adopted an interpretive approach that included focus groups (FGs) and in-depth interviews with key informants (KIs). This approach keeps to the methodological tradition of political ecology and enables work across scales, emphasizing local groundedness and context while embedding findings within broader sets of socio-structural relations (Robbins, 2011; Miles, Huberman & Saldana, 2014).

To investigate how various drivers informed health and wellbeing, 15 focus group [8 female groups (ten in each), 7 male groups (10 in each)] with elderly populations (50+ years) and 34 in-depth interviews with KIs were conducted in the Greater Mukono Area of Central Uganda (e.g. Mukono District, Buikwe District, Kayunga District, Buvuma District) in 2018 (see: Tables 4, 4.1 and 4.2 for participant characteristics). Purposeful maximum variation sampling was used to select FG participants and KIs. Since we did not intend our sample to be statistically representative, we were able to identify information-rich participants and make theoretical points about common experiences (Patton, 2002). Elderly participants 50 years and above were selected for participation in the study because the age of 50 is deemed to provide a more accurate representation of the older populations in the region and is recommended by the WHO (WHO, 2015). KIs were selected based on their organizational and institutional association with elderly populations in Uganda. KIs provided insight into the priorities and policy discourses surrounding elderly issues and revealed important structural impediments (Lytle et al., 2003).

All FGs were conducted outdoors, in common areas accessible to most elders, and comprised homogenous groups of individuals (e.g. by gender, "young" old (50-70 years) and "old" old (70+ years) to develop a comprehensive analysis of aging experiences. Interview guides were pre-tested for content and context by academics and local community members. Questions were informed by PEH and aimed to acquire rich information pertaining to how different resources in socio-economic, political and physical environments impacted health and wellbeing. A checklist of topics (semi-structured and open-ended questions) guided all discussions and probed participants about several different topics related to their health and wellbeing. These checklists were designed to be flexible; new questions were added as necessary during the data collection process. Considering some of the questions elicited retrospective responses, the authors are mindful of the ambiguities inherent in trying to reconstruct past experiences and changes. Rather, elders' stories provide conceptual building blocks for a partial and situated understanding of health in the Ugandan context.

Since elders in Uganda are side-lined in socio-economic and political spheres, FGs provided the opportunity for elders to freely discuss their challenges and experiences in a supportive and collaborative environment (Kitzinger, 2005). The safety in numbers offered by FGs enabled elders to support and encourage each other in explaining stigmatizing and damaging experiences, in turn shifting from self-blame to the exploration of structural and systemic factors impeding health and wellbeing (Kitzinger, 2005). KIs helped to situate elders experience within a larger economic, political discourses and environmental contexts. FGs averaged approximately 1.5-2 hours in length while KIs lasted between 45 minutes and 1 hour in length. All FGs and KIs were conducted in the language preferred by the participant: English, Swahili or Luganda. In order to moderate cross-cultural sensitivities, a research assistant born and raised in the research areas was hired to assist in the translation. All FGs and KIS were

audio-recorded with consent of the respondents. The study received ethical clearance from the first author's academic institution (#22326).

Table 4.1 Focus Group Demographics

Focus Group Participant Characteristics (N= 15) (10 participants in each)		
District	**Age**	**Total # of Focus Groups (M/F) (% of Focus Groups)**
Mukono	~50-70	2 (1 M, 1 F) (M, n= 10; F, n= 10) (13%)
	~70+	2 (1 M, 1 F) (M, n= 10; F, n= 10) (13%)
Buikwe	~50-70	2 (1 M, 1 F) (M, n= 10; F, n= 10) (13%)
	~70+	3 (1 M, 2 F) (M, n= 10; F, n= 10) (20%)
Kayunga	~50-70	2 (1 M, 1 F) (M, n= 10; F, n= 10) (13%)
	~70+	2 (1 M, 1 F) (M, n= 10; F, n= 10) (13%)
Buvuma	~50-70	—
	~70+	2 (1 M, 1 F) (M, n= 10; F, n= 10) (13%)

Table 4.2 Focus Group Participant Characteristics

Demographic Characteristics of Participants in Focus Groups		
Characteristic	**Age**	**Number of individuals (n=150)**
Female headed households	~50-70	21 (14%)
	~70+	24 (16%)
Male headed households	~50-70	40 (27%)
	~70+	30 (20%)
Residing with spouse	~50-70	19 (13%)
	~70+	16 (11%)
Residing with grandchildren	~50-70	43 (29%)
	~70+	26 (17%)
Currently working	~50-70	64 (43%)
	~70+	56 (37%)

Table 4.3 Key Informant Characteristics

Key Informant Characteristics (n= 34)	Total
Government: National (Ministry of Gender Labour & Social Development, Ministry of Health, Ministry of Disability, National Council for Older Persons)	n= 6 (16%)
Government: District (District Chairpersons of Older Persons Council, Chief Administrative Officer, District Financial Officer, District Health Officer, District Officer of Environment & Planning)	n= 6, (16%)
Government: Local (Town clerks, community development officers, senior development officers, chairpersons of local council)	n= 7, (19%)
Health Services (physicians, nurses, community health workers)	n= 7, (19%)
Non-Governmental Organizations (Reach One Touch One (ROTOM), HelpAge International, Uganda Reached the Aged (URA), St. Francis Health Center, Centre for Health, Human Rights & Development, Providence House)	n= 8, (24%)
Total	n= 34

4.1 Data Analysis

All FGs conducted in Swahili/Luganda were simultaneously translated into English by an individual fluent in English who held a MA in public health and administration during data collection. Transcripts were transcribed verbatim by the first author and proofread for accuracy by both authors. All data was thematically analyzed using NVivo 11 (QSR International). Thematic data analysis was guided by our research objectives and theoretical constructs related to socio-ecological dimensions of health and wellbeing. Following Strauss and Corbin (1998), we conducted line-by-line coding to produce textual elements which were organized into themes and sub-themes. For each participant group, the first author read all transcripts to determine thematic codes (arising deductively and inductively) that produced a coding manual. Key themes were identified according to their: (1) relevance to the research objectives; (2) frequency that the theme was mentioned; and (3) the predominance of the same theme across different types of participants (Miles et al., 2014). This iterative process of continually identifying themes, linkages

and explanations led to saturation, whereby the themes were well described by and fitting with the data (Dey, 2012).

Once the coding manual for each participant group was complete, interrater reliability (Miles & Huberman, 1994) was employed to enhance qualitative rigor. For each participant group, two transcripts were coded by the first author and an additional researcher. Coding agreement for each participant group was calculated as greater than 75% (Miles & Huberman, 1994). Both inter- and intra-rater reliability were calculated at 96% agreement for focus groups and 98% agreement for KIs on 95% of the codes. Coding differences were discussed, and the revised coding manuals were used to code the respective transcripts. This helped to facilitate a degree of inter-coder reliability, promote investigator triangulation (i.e. the use of multiple investigators in a single study to investigate the same phenomenon and compare results) (Denzin, 1978), and strengthen the credibility of results (Baxter & Eyles, 1997).

5.0 Results

Results are organized around three key thematic areas: socio-cultural drivers, ecological drivers, political-economic drivers. To facilitate reporting, tables are used to illustrate the number of respondents mentioning key themes and sub-themes (see: Table 4.4). Direct quotations from FGs and KIs are used to punctuate these themes and contextualise participants' responses. To ensure anonymity, quotations are labeled using pseudonyms, data collection technique, gender [M=male, F=female], district [Mukono, Kayunga, Buikwe, Buvuma), age group [50-70, 70+], and KI type [Government = GOV, Non-Governmental Organization: NGO, Health Provider= HP].

Table 4.4 Summary of responses from focus group discussions and key in-depth interviews

Drivers of Health and Wellbeing	Number of Mentions (# of Focus Groups) (% of Focus Groups)	
	Focus Groups (n=15) (10 participants in each) (% of participants)	**Key Informants (n=34) (% of participants)**
Sociocultural Drivers		
Collectivist to individualist society	132 (13) (87%)	27 (27) (80%)
Extended family collapse	119 (12) (80%)	26 (26) (76%)
Material gains	124 (12) (80%)	26 (26) (76%)
Individualism	116 (13) (87%)	18 (18) (53%)
Desire for personal prosperity	110 (13) (87%)	16 (16) (47%)
Rural-urban migration	52 (5) (33%)	13 (13) (38%)
Stolen property/goods	84 (10) (67%)	16 (16) (47%)
Changing norms around intimate relations	87 (10) (67%)	14 (14) (41%)
Child promiscuity	84 (10) (67%)	14 (14) (41%)
Dumping children	85 (10) (67%)	13 (13) (38%)
Competing daily priorities	92 (11) (73%)	13 (13) (38%)
Health service neglect	122 (12) (80%)	27 (27) (80%)
Fear of aging	97 (9) (60%)	25 (25) (71%)
Stigma towards aging	118 (12) (80%)	23 (23) (68%)
Ageist attitudes	131 (14) (93%)	22 (22)
Competing medical priorities	143 (15) (100%)	23 (23) (68%)
Lack of geriatric knowledge	39 (4) (27%)	24 (24) (71%)
Medication shortages	97 (10) (67%)	27 (27) (80%)
Environmental Drivers		
Changing seasons	116 (13) (87%)	—
Intensified rains	112 (11) (73%)	4 (4) (12%)
Prolonged droughts	132 (13) (87%)	—
Famine	118 (12) (80%)	3 (3) (9%)
Water inaccessibility	127 (14) (93%)	—
Soil quality decline	86 (9) (60%)	—
Housing deterioration	114 (14) (93%)	—
Poor housing ventilation	110 (12) (80%)	2 (2) (6%)
Pest filled houses	117 (13) (87%)	—
Political- Economic Drivers		
Lack of pensions	141 (15) (100%)	25 (25) (71%)

Negative employer attitudes	107 (11) (73%)	13 (13) (38%)
Political neglect	143 (15) (100%)	26 (26) (76%)
Failed promises	142 (15) (100%)	─
Competing demographic priorities	147 (15) (100%)	24 (24) (71%)
Demographic dividend	113 (10) (67%)	23 (23) (68%)
Political disconnect	116 (11) (73%)	26 (26) (76%)
Global ageism	─	23 (23) (68%)

5.1. Sociocultural Drivers

Changing sociocultural values were discussed as key factors detrimentally impacting elders' health and wellbeing. Many elders reported that their social environments had transformed from one based on collectivist attitudes of co-operation and sharing, to one grounded in the search for individual wealth and prosperity. While the extended family system had historically provided the bulk of economic and psychosocial support for aging individuals, elders indicated that this system was collapsing and stripping away protective health buffers:

> The culture has changed. There's a disconnect between us, our families and the communities. Before, there was oneness. Elders were respected and cared for. But now we're separated. Everyone's on their own. It's individualistic. Kids are more interested in economic gains than taking care of us, so you suffer. We're neglected. They just cut you out. You can't get proper feeding, health care, you're isolated. It causes much [high blood] pressure.—FG, F, Mukono, 70+

Many explained that society's push for economic development coupled with rural deprivation was creating a situation where younger generations were more concerned with material gains and personal prosperity than maintaining traditional supportive relationships. Several described how this desire of wealth was creating a situation where children were stealing parents' possessions and kicking them out of their homes. This in turn denied them access to some basic determinants of health, leaving them marginalized, distraught and in a state of fight or flight:

> Your family wants you dead, so they get your property. But they can't wait so they kick you out. It's a big problem. My kids kicked me out. They want the land. I tried to get help from the authorities, but they don't care, they just ignore you. So now I have no stable food source or place to live. I'm just squatting. You don't know what next. Everyone wants what the other has, it's all about competition. You could die and no one would notice. Now, its just survival of the fittest around here." – FG, Male, Kayunga, 70+

Several elders elaborated on shifting norms around intimate social relations and the consequential outcomes for their health and wellbeing. Many revealed their young adult children were engaging in extramarital affairs, resulting in the birth of 'illegitimate' children. In the context of Uganda, if a child was produced outside of the marriage, it would not be accepted by the husband or wife in the family. Several elders discussed how their adult children's promiscuity and laissez faire attitudes towards sexual relations created a context where adult children would 'dump' their newly born babies with their aging parents and expect them to raise the child. While a few elders welcomed this opportunity, the majority felt that their adult children were simply rescinding their parental obligations, adding more stress to their already strained lives:

> Our kids are running around and sleeping with whoever. The girls running around with men, they get pregnant and just dump the child with us. It's cause the child won't be accepted in that marriage. But they're being frivolous. For us, we've worked our whole lives. We have little, and it adds to our stress. Our kids never come see you in the first place, then they just dump the child on you to raise. It's happening everywhere. And some are already raising orphans. The whole situation makes us angry. There's no respect for us at all. ― FG, M, Buikwe, 70+

Not only did care responsibilities add to elders' challenges, the tasks associated with care provision―food preparation, education, medicine― exacerbated daily stress and anxiety. Moreover, many elders revealed they were caring for HIV positive orphans, which meant they also had to ensure they had money to access and acquire antiretrovirals (ARVs) and ensure the child received sufficient nutrients to maintain strength. While these added responsibilities severely impacted elders' lives, they felt they had little choice but to personally shoulder these tasks, even if it meant sacrificing their own health:

> You can't turn the child away. It's your blood so you raise them. But it's hard. You're forced to be a parent but you're not in a position. You're old with little to show, but you must find them what to eat, what to drink, money for [school] fees. And then they may need ARVs and special things. It's so stressful. It causes us [high blood] pressure. At times you don't know where the next meal's coming from. You just toil all day to make sure they eat, even if it means you go without. ― FG, F, Mukono 50-70

While KIs recognized changing sociocultural contexts were severely challenging the elderly population, the majority indicated that apart from a few NGOs, no public social services were available to address their concerns. KIs explained that due to cultural stereotypes of aging as 'unproductive' and 'worthless', the process of aging was feared and stigmatized by citizens and government systems. These negative stereotypes permeated society and created an environment where aging populations were "psychologically tortured". As indicated below, this stigma towards elders relegated their concerns to the lowest priority in resource allocation and service provision, robbing them of important resources essential for life:

> People in Uganda fear getting old. Our culture sees them as something useless, untouchable, like they're a corpse. We all fear growing old because the old have problems. It hurts to have a high position at one point, but then you're old and a nobody, your time is over. You used to be something, but now they just throw dust on you. Our culture doesn't concern itself with aging cause we see them as something useless, unproductive, then we neglect them in all policies, service provision, everything. It's all about the young. But this neglect is a psychological issue that's really torturing older people in developing countries." ― KI, NGO

When elders were queried about their ability to access health care, they indicated that despite experiencing many health challenges in their daily life, their decision to seek care occurred within a context of limited opportunities – lack of transportation, physical strength, economic ability, and competing obligations― child care, water, food, economic acquisition. This put their decision to seek health care in direct conflict with other immediate needs:

> When you're sick, there are so many challenges. First you have to get there. There's no transport so you walk miles to the main road, then pay for a boda (public transport). But you're in pain and

> can hardly walk. If you get there, you wait hours. There's no queue for us, but we can't stand long so it's difficult. Then they just write you a prescription and tell you to buy it. Yet you have no money. And all that time we should be working, getting food, taking care of the kids. So all those challenges make you just stay home next time and then you just get sicker. ─ FG, F, Buvuma, 50-70

Yet, even when they did attend a health facility, workers would often deny them treatment, stating there was "no medicine for the elderly". Despite attempting to alleviate their health concerns, the denial of health care perpetuated a cycle of poor health, self pity, self medication and possible death:

> The treatment is not good. They say "Jaja, why did you come? You still need life?" Then they tell us "There's no medication for the elderly". Then we're not helped. It stresses us so much cause we get sicker. We take herbals but that doesn't work so by the end of the day, you end up dying. People are dying because we're not taken care of. It's a big issue. ─ FG, M, Kayunga, 70+

Although some health workers recognized the denial of health care was a problem and would attempt to assist elders, the majority revealed that due to ageist attitudes engrained in the health system, health workers would easily decide between who dies and who survives:

> The health workers have attitudes; their priority goes to the young ones. They bark at the oldies. They think they're a nuisance, they've expired, that they're not productive. So they cater to the energetic young. If an older person goes to the hospital with diabetes, and a younger person goes with diabetes, because now the young also have it, they're competing for treatment. But who does the provider want to treat? The child. The old person could be so sick with malaria or pneumonia and they have the medicine, but they don't give it. They think it's a waste. Then what? They go home and die. So, it's a stigma. Older persons suffer locally and can't get any help.- KI, HC

Health workers also recognized that elders were arriving to clinics more often with illnesses related to aging that they could not treat due to a lack of specific knowledge and medication shortages. As indicated below, newly emerging challenges related to aging complicate Uganda's already weak health infrastructure, raising serious concern about the health of Uganda's future aging populations:

> The numbers arriving with chronic conditions, hypertension, musculoskeletal problems, diabetes is increasing. The problem is we only get medicine once a quarter. And the NCD medicine is small, so it goes fast. It's a challenge when it's gone. You write a prescription for the elder to buy elsewhere but they can't afford it since they're mainly poor peasant people who don't earn.

> So, managing them becomes a challenge. Then we don't have geriatricians. Every doctor does general medicine, but the conditions are peculiar to this age group. But there's no specific training. In Africa our life expectancy was low, but now as conditions improve, people are getting older. The state needs to prepare so we can take on this age challenge before it's too late.—KI, HW

5.2 Environmental Drivers

Given that most of our participants lacked any form of economic support, the majority remained engaged in informal agriculture, both for personal subsistence and economic survival. Nearly all noted that drastic changes to the physical environment — fluctuating rainy seasons, deteriorating soil quality, extreme heats, prolonged droughts — had created lasting effects on their ability to acquire food and nutrients, ultimately undermining their health:

> We used to plant in March, and it would rain until June but now it's changed. It begins raining in May, then shines until August, so you plant in September. In between, it's famine. There's no food and you don't earn. We miss a lot of nutrients and become more susceptible to sickness, like the flu. Because of not eating for so long, you get ulcers, anemia, and other sicknesses. Then when we expect rain, it doesn't come for months. When it finally comes, it's so severe. It affects our health; there's an increase in malaria and typhoid, especially among the elderly. So, the changing weather directly affects our health. —FG, F, Kayunga, 70+

On top of food shortages, water access and availability were a common theme of discussion. They were often forced to walk great distances in order to acquire water for personal use, hygiene and sanitation. While water acquisition is a common challenge for most of the Ugandan population, it was compounded in old age due to declining physical strength, functional (im)mobility, deteriorating communal living systems, and increasing droughts:

> There's no clean water around here. I go three miles to the pump. When you get there, the water might be so low you can't get any. The droughts are happening more so there's shortages. Even if you're lucky and get some, you then must carry it all the way back, and that means going up a hill. It takes hours. You're in pain and don't have the energy so it's hard. People pass by but don't offer to help. They just keep on their own. So, our health is highly affected by not having enough water nearby. — FG, M, Buikwe, 70+

Coping strategies varied:

> You do different things to prolong your water. Some drink every other day, some pray for a good Samaritan to pass by and feel sorry and buy them water, others pay people to carry for them. For me. I have 3 small jerry cans. I fill them all and just keep removing one by one. When you're done, you're faced with a challenge. You just wait for someone. Otherwise you go without. ―FG, M, Buikwe, 50-70+

Yet, these strategies often left them in difficult situations of having to choose if water would be used for personal hydration or for their hygiene and sanitation, particularly for women:

> Since I can only carry one liter, with that, I have to drink, bath, cook. You make tough choices between your thirst and your cleanliness. Cause we're old, when we use the latrine, we can't squat, so you touch the ground and everything that's there. If you don't have water, you can't clean so it makes us sick. It's often thirst that's more important than cleanliness. We know it makes us sick, but there's nothing we can do. ― FG, F, Mukono, 70+

While elders wished they could seek reprieve from daily hardships in the comfort of their homes, many revealed that their housing structures were an additional challenge complicating their poor health:

> My house is a center for disease. We have bed bugs, rodents, snakes, all that. Bed bugs cause anemia, because they take a lot of blood. Because of bad hygiene and ventilation, it causes pneumonia and TB. On top of that, you're sleeping on the ground. It's dusty and hard to breathe. When it rains, the homes flood. Then you're wet and cold and it causes more sickness ―FG, M, Buikwe, 50-70

On top of this, many highlighted that their feeble housing structures were increasingly strained by the intensified rains and powerful winds that were more frequently occurring in the Central Region. As a result, many discussed long sleepless nights fearing for their safety:

> These houses are affecting us. Since they're in bad condition, when the rains come, we don't sleep. We have tension. We fear our houses will collapse on us and we'll die. When the rains and winds come, we fear we'll die. Your house should be a place for resting but we can never rest of sleep when it rains. You're always under pressure.― FG, M, Buvuma, 50-70+

Paradoxically, environment-health linkages did not come up in conversations with KIs. When

probed further, only a few were able to draw connections between some environmental factors (e.g. changing climates, water, sanitation, hygiene, housing structures) and elderly health outcomes.

5.3 Political-Economic Drivers

Economic and political marginalization were common themes raised by elderly participants. Elders frequently underscored how a lack of pensions and limited income saving due to poor salaries, a lax saving culture when young, reinforced by a lack of trust in banking and market systems left the majority engaged in the informal economy (e.g. agriculture, small petty jobs: washing, weaving, mechanical repair) either to secure a few shillings for basic needs or simply obtain personal subsistence. Even still, those who sought formal employment were habitually rejected as (potential) employers sought to hire only young 'strong' individuals. Despite attempting to improve their situations, ageist attitudes embedded in the broader economy left them economically marginalized and feeling dejected:

> We still want to contribute to society and be productive. But when we try, they (employers) give you one look as if to say you're wasted. They think we're something useless. Only the young ones can get work. We're left on our own. Like we're untouchable. – FG, M, Mukono, 50-70+

Many highlighted that while the government promised to implement economic support for elders in both the National Policy (2009) and National Plan (2012), they had never received any financial provision. This creates a vicious cycle of uncertainty, stress and poor health outcomes:

> I don't know where the money will come from. You just live life day by day constantly worrying what's next. I'm just squatting on a small plot now with my grandchildren. I don't have a stable food source or even water. I have no home. Everything's uncertain. I'm stressed with [high blood] pressure. I get headaches and dizzy thinking. Not knowing what is next is really impacting my health. I'm gonna leave these kids without a jaja [grandparent].- FG, F, Buvuma, 70+

Elders further contended that despite the National Policy and Plan, government officials never came to consult them about their needs, let alone provided any form of material support. Even when they

attempted to voice their concerns, their opinions were ignored by government. It was unanimous that all levels of government were more concerned with catering to the youth than providing for the old, in turn leaving them angry, disenfranchised and feeling forgotten:

> The government never consults us. We must go to them. But when we're in planning meetings and try to suggest something, they trash it off and call us ancient. There's no government help at all, even the NGOs. Everything's for the young. The government has funds for the women, children, even the men. What about us? They never consider or plan for us. We get nothing. No political help, no legal, no health, nothing. We're all angry and frustrated. FG, M, Buikwe, 70+

When KIs were queried about the efficiency of the policy, several recognized an apparent disconnect between policy and practice. While the National Policy is recognized in parliament, KIs indicated that very little attention had been given towards actual implementation:

> It's unfortunate that the implementation of the national action plan hasn't been effective. It comes without being financed. There was a time the government was talking about having implementing units right to the parish level. But still it's at the top, it's being cut off to the people at the lower levels.—KI, GOV, Kampala

When asked why little attention had been given to policy implementation, the majority of KIs indicated that much of the government funding and resources were directed towards capitalizing on the demographic dividend, in turn leaving elderly populations marginalized in development strategies:

> The government's so focused on these youth issues. So much of their resources are going to develop incentives for the young population so they can get work and grow the economy. They're our hope for development. They're such a large population so we're focusing the attention on them. What can old people do? You know, who cries the loudest gets the most, those old people without a political voice are really neglected when it comes to any real policy consideration. Even when they put up the National Policy for the old. The government sees no benefit in supporting them. It's just talk. I won't become functionable for some long time. – KI, GOV, Kampala

Even still, the majority of the KIs suggested this negative sentiment would not change because even those "at the top" in large global organizations fail to recognize population aging in Africa as an issue worthy of attention:

> The challenge with the government funding is two side. One relates to funding agencies. The funding agencies push an agenda. The UNFPA puts a focus on young populations. But one would expect the UNFPA would look at health for all ages like the SDGs. But at the end of the day, they're pushing for the youth. Many other funders focus on maternal and child health. Population aging is really sidelined, at the tail end of funders. Why? Because even the UN itself said you better convince people to fund aging. It's a big mountain to climb. So, at the top level, policies and decisions are skewed to a certain political aid group. If global organizations don't care about aging, it's just obvious the Ugandan government would do the same.- KI, ED

6.0 Discussion

The aim of this research was to examine how political-economic, socio-cultural, and environmental drivers shape the health and wellbeing of aging bodies. By attending to the contextual experiences of aging in resource deprived contexts of SSA, the study reveals how the health of elders is both a discursive and material struggle, shaped by unequitable resource distribution, changing socio-cultural relations, and fluctuating environmental conditions that intersect and become embodied (see: King, 2010). Using PEH further elucidates how the health of aging bodies is situated within 'the complex layering of history, social structure and the environments" of Uganda that together produce expressions of health and wellbeing (Kearns and Moon, 2002: 611).

Foremost, the findings demonstrate how discursive framings of old as "untouchable", and "worthless" by various institutional actors have real material consequences for bodily health and wellbeing (see: King 2010). At the macro scale, institutions make judgements on the basis of bodily comportment, socially constructing norms surrounding who is valued (e.g. young) and devalued (e.g. old). Hierarchies of difference are then created, placing youth as superior and elderly as inferior. These systems of power and privilege permeate society, creating an environment where negative stereotypes and discrimination towards aging bodies are accepted as de facto truths (Palmore, 2005). These stereotypes then directly (via allocation and distribution) and indirectly (via age discrimination and stigma) affect

aging bodies in multiple domains ─ political-economic, sociocultural, environmental─ that together become embodied in their physical and psychosocial health and wellbeing.

Within the political realm, the findings expose a clear policy disconnect between the rhetorical claims of the Older Person's Policy and the local realities of aging individuals in the Central Region. The fact that the government developed a policy for older persons yet failed to channel resources and implement programs for them based on their presumed 'futility' and 'worthlessness', underscores how opportunities for health are intrinsically tied to political ideologies of development (King, 2010). In the context of Uganda, where the government's key development strategy – Uganda Vision 2040 – aims to 'harness the demographic dividend' by incentivizing the young population, while making no reference to the elderly helps explain why elders in the Central Region continue to experience such perverse institutional neglect (see: GOU, 2015). Consistent with other studies (see: Stewart, 2014), the findings suggest the Older Person's Policy remains a rather abstract ideal, limited in scope, coverage and financing.

Although the Ugandan government stipulated the provision of social security as a key goal under the policy (see: MoGLSD, 2012), the total expenditure allocated for the elderly is equivalent to 1% of GDP, significantly lower than the expenditure levels of other SSA countries (regional avg. 2.8% of GDP) (Stewart et al., 2014). Such financial demarcations placed on the needs of the elderly not only restricts elders' opportunity to live in "a secure and dignified environment that fulfills their needs and aspirations" (MoGLSD, 2012, pg. 6), it also represents the devaluing of old age and perpetuates ageist attitudes, ones that favour the youth, and stigmatize the old. As theorized by King (2010), discrepancies between policy and local realities can potentially create detrimental health outcomes. Such consequences were evident in the way employment laws restricted elders' opportunities to improve material circumstances and acquire

basic necessities for life, while simultaneously undermining their identities as contributing members of society— all of which reduced their perceived social worth and self esteem. Considering that the Central Region has the largest share of youth in the country (UBS, 2017), the implications of the demographic dividend for aging individual's health and wellbeing are stark, given the pervasive neglect to the elderly in social services, economic provision, and pension systems (MoGLS, 2012).

Institutional forms of ageism were found to permeate other societal spheres and were most prominent in the health system. Even though elders had complex health care needs (e.g. pneumonia, TB, malaria, diabetes, hypertension), their ability to maintain some semblance of health was perpetually undermined by ageist attitudes embedded in the health system. As indicated in the findings, the refusal of health workers to provide health care for aging bodies on the pretense of being "too old" and intrinsically "less valuable" than those of younger ages categorically denied them access to a fundamental human right based on bodily comportment. Besides exacerbating elders' pre-existing health problems, ageist attitudes interacted with other structural inequalities— poor infrastructure, lack of transportation, a dearth of specialized geriatric medicine— further undermining their decision to seek care. These ageist attitudes combined with structural inequalities became internalized and led to a host of unhealthy behaviours, such as the refusal to seek health care, even when the alternative was sickness and/or death. These findings support other literature from Uganda (see: Schatz, et al., 2017) that identify health worker ageism, as well as poorly staffed and under-supplied facilities as main factors contributing to underutilization of health care among the elderly.

The findings of this study expand these insights to show how this neglect to aging bodies in the health system is connected to broader 'technopolitical global health discourses" (see: Robbins & Bishop, 2008). As indicated in this study, such denigration towards health in old age was perpetuated by

international global health bodies (e.g. UNDP, UN agencies, WHO, UNAIDs) who favour 'more important' health problems, such as maternal-child health, at the expense of elderly health needs. In a way, the findings show how global organizations socially construct notions of value and stigma that transcend boundaries and become embodied in adverse physical and psychosocial health outcomes (e.g. feeling marginalized, ostracised, neglected in service provision). As corroborated by others (see: Lloyd-Sherlock et al., 2016), global ageism in healthcare is becoming increasingly blatant and in need of urgent attention. In the context of Uganda, addressing engrained ageism and its pernicious effects on the health system is critically important, given that age-associated illness and disease will continue to rise with the growing elderly population, posing even greater burdens on the countries currently weak health infrastructure (see: Wandera, 2015b).

These discriminatory practices further cascaded into elders' interpersonal lives, complicating their quest for health. As underscored in the study, the perception that elders' health was restricted due to the fracturing of community and family systems is consistent with other studies in Uganda that highlight the consequences of deteriorating social and family systems on elders' health and wellbeing outcomes (see: Golaz, Wandera, Rutarema, 2015; Golaz, Wandera & Rutaremwa, 2017). Elders' explanations that their deteriorating interpersonal relationships were driven by youths' desire for wealth and prosperity is interesting and speaks to the way money, the desire for financial prosperity, and need for employment act as a catalyst for impulsive and irresponsible behaviour. As indicated in elder's responses, the increased importance given to money and financial prosperity was perceived to be responsible for rupturing family systems and creating chaos in marital relations. These changing interpersonal dynamics not only created stress and resentment for elders, given that they were losing the normalcy of social life and attendant family support, it further challenged their health, as they are often tasked with the responsibility of raising

a child borne out of wedlock. This finding parallels work from Malawi (see: Kaler, 2006) that shows how elders perceive money as a negative vector of destruction, blamed for the deterioration of marital relations and intergenerational support systems.

In the context of Uganda, it is definitely plausible that village life is gradually and inexorably being transformed as a result of modern wage economies, which in turn, is creating implications for social relations and family dynamics as indicated by elders. Yet, as anthropological literature suggests, these fluctuating family dynamics may be more longstanding and underpinned by factors beyond economic realities. As several studies indicate (see: Stephens 2016; Nabaitu, Bachengana, Seeley, 1994; Mukiza-Gapere, Ntozi, 1995), marital relations since the 18th century among the Baganda have been marked by continuity (e.g. marital stability), innovation (e.g. elopement) and rupture (e.g. dissolution), practiced as a means of contesting parents' lineage, escaping infertility, seeking more satisfying sexual relations, maintaining personal autonomy, or forming personal alliances.

Whether the findings of intergenerational and interpersonal change represent a sociocultural continuation for the Baganda or a more pronounced shift to family and community systems is unclear, but what is certain is that these perceived changes are having real impacts for the health and well being of elderly in the region – emblematic in their discussions of high blood pressure, nutrition deficiencies, and additional stress and anxiety associated with child care responsibilities. This finding is consistent with studies from SSA that have found changing family systems and caregiving responsibilities may lead to increased physical and somatic complaints such as fatigue, insomnia, and weakness, and psychosocial implications like anxiety and stress, especially where care is being provided with few financial resources (Ice, Sadruddin, Vagedes, 2012; Ssengonzi, 2007; Wright, Salwango, Seely et al., 2012).

Embedding the analysis within the physical environment revealed how opportunities for health and wellbeing are intrinsically tied to environmental systems in place (King, 2015). As indicated in the findings, various environmental stressors are producing complex physical and psychosocial health realities for the elderly in the Central Region. First, the findings highlight how changing climatic conditions are undermining elders' ability to acquire sufficient nutrients needed to maintain bodily functions, reducing their immunity and exposing them to an array of health complications. This adds to the sparse literature on potential drivers of undernutrition among the elderly in Uganda (see: Kikafunda & Brany, 2005) and underscores the importance of considering the nutritional needs of the elderly in the Central Region, given that malnutrition is associated with increased morbidity, mortality, functional ability, and quality of life (WHO, 2015). This cycle of changing climatic conditions, nutritional deficiencies and poor health outcomes is further compounded by new environmental conditions (i.e. prolonged droughts, intensified storms, extreme heats) that are fostering landscapes conducive to emerging infectious disease (e.g. malaria, typhoid). Considering that malnutrition predisposes older populations to infectious disease, especially in the context of poverty and limited resources (see: WHO, 2014), more work needs to explore the interplay between infectious diseases, aging, and nutrition in the Uganda's Central Region— particularly in light of regional projections indicating increases in temperatures, droughts and heavy rainfall that may increase infectious disease transmission (Winthrop, Kajumba, McIvor, 2018).

Equally, the results underscore the importance of water and sanitation for aging and health—an understudied topic in the context of aging in SSA. As indicated in the findings, unavailable and inaccessible water sources posed additional challenges for the elderly given their limited mobility and

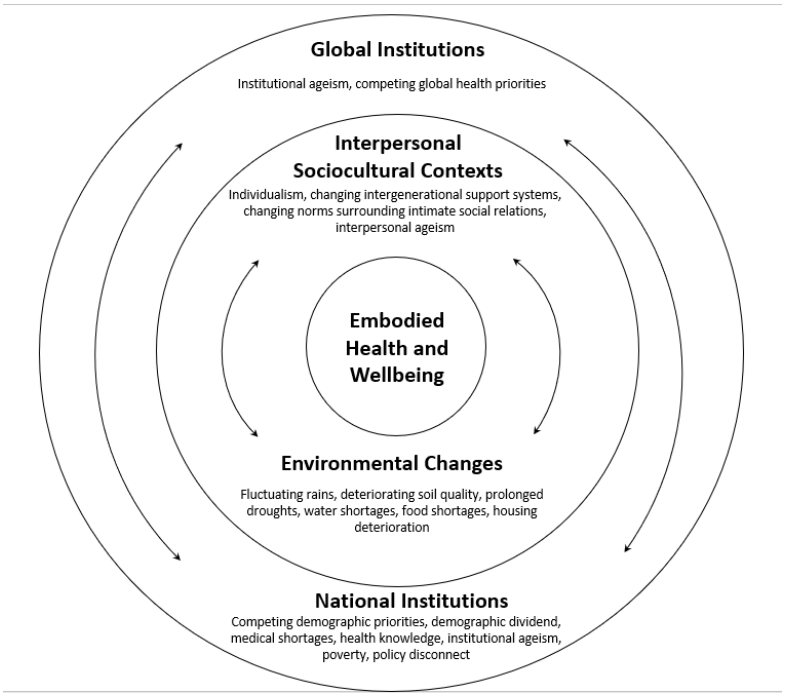
strength, resulting in increased susceptibility to dehydration and desiccation (see: WHO, 2015). Considering Uganda's Central Region is projected to continue experiencing prolonged periods of drought (FAO, 2018), issues of water acquisition become particularly concerning given that dehydration is associated with impaired cognition, functional immobility, immune deficiency, and mortality among the elderly (WHO, 2015). Moreover, the findings reveal important health challenges associated with defecation and sanitation. In the context of aging in Uganda, where physical immobility and functional limitations generally increase with age (see: Wandera et al., 2014; Maniragaba et al., 2019), seeking bodily relief means older people are forced to expose themselves to the grounds of latrines and all of its encompassing filth. Despite awareness that these practices would likely cause sickness and disease, the lack of water and requisite sanitation means the elderly are left with no other option than to endure the shameful experiences of defecation without sanitation. Still, the fact that no key informant recognized issues of water as a potential driver of poor health outcomes illustrates how health inequalities among the elderly continue to exist due to policies and systems that fail to understand the local realties and daily experiences in elders in the Central Region (see: King, 2010).

Lastly, the results show how environmental stressors interact with the built environment of homes to produce detrimental physical and psychosocial health impacts. Not only were poor housing structures found to produce sickness and diseases among the elderly (e.g. pneumonia, TB), they were exacerbated by environmental conditions (e.g. increased frequency of storms, winds, rains), that increased elders' risk of stress and anxiety. In the context of the Central Region, where older people are often the least equipped to physically, psychosocially and economically mitigate the effects of damage to their homes, even when they want to (see: Stewart et al., 2014), the effects of changing climatic conditions on an older person's health is likely to become a major issues for individuals and for policy-makers (Scharf & Keating, 2012).

These findings support recent reviews in Europe and Latin America that highlight climate change, especially its effects on residential environments for older persons, as key potential influences on health and well-being (Sánchez-González & Rodríguez-Rodríguez, 2016).

Uncovering these multiscale social processes and causal pathways reveals how health and wellbeing in old age is an embodiment of place-specific forms of political-economic, socio-cultural and ecological inequality. We draw on these findings to develop a framework (see: Figure 4.1) for understanding embodied health and wellbeing in the UCR. The framework has two macro level determinants (i.e. national institutions and global institutions), and two meso level determinants (i.e. sociocultural relationships, and environmental conditions). Both macro and meso level determinants operate dialectically to shape expressions of embodied health and wellbeing at the micro level. Institutional discourses (or lack thereof) shape policy responses and resource allocation, which determine real-world experiences of aging and health in place. Elders also actively and resourcefully respond to competing contextual inequalities by challenging discriminatory practices, devising coping mechanisms, and crafting livelihood strategies. Together, these multiscale processes shape the aging in place relationship in Central Uganda.

Figure 4.1 Embodying Health and Wellbeing



7.0 Conclusion

This study advances the geographies of aging literature both empirically and conceptually by illuminating the multiscale relational place processes— political-economic, socio-cultural, ecological— that produce health and wellbeing outcomes in a SSA context. In so doing, it extends literature in PEH to show why it is important to consider 'age' as a structure of power that organizes society, informs group identities and access to resources (Lrekula, Nikander, Wilinska, 2018). Considering Uganda's older populations are projected to rise five-fold by 2050, the government must take immediate action to meet the needs of the elderly. First, the Ministry of Gender, Labour and Social Development (MGLSD) should guarantee that all individuals have financial support in old age. Other SSA countries (e.g. Botswana, Namibia, South Africa) have successfully implemented universal pensions and social assistance schemes,

with 75-90% of their elderly covered (see: Stewart et al., 2014). While the Social Assistance Grants for Empowerment (SAGE) has shown signs of improving senior's access to health care, economic stability and nutrition, it has yet to be equally rolled out across the country (see: Mertten et al., 2016; Nalwanga & Lund, 2018; Stewart et al., 2014). As such, the Ugandan government should take concreate steps to implement a universal pension scheme to reduce old age poverty, provide some financial independence and indirectly benefit children living in skipped generation households (World Bank, 2001). Similarly, eliminating mandatory retirement ages, as recommended by the OECD, would benefit older workers, employers and economies, allowing older adults, if they so choose, the freedom to remain active participants in society (EU, 2000). To this end, a more balanced approach to Uganda's Vision 2040 that includes older populations in development discourses would ensure that resources and opportunities for socioeconomic prosperity are distributed across the life course (see: Dugarova, 2017).

Equally, mitigating health challenges associated with population aging in Uganda is a growing concern (see: Maniragaba et al., 2019: Wandera et al., 2015a;b). The Ministry of Health should thus strengthen the healthcare system by intensifying long term prevention strategies, curative and specialized health care, such as geriatricians and gerontologists, to cope with the complex health issues associated with aging. Promoting health care, especially for those with mobility limitations, through community outreach programs or home visits, would go a long way in forestalling complex health outcomes, while providing the added benefit of social contact and communication (Wandera et al., 2015a). Likewise, prevailing ageism in the health system must be addressed in order to ensure ethical and equitable heath care in old age (see: Dugarova, 2017).

Environmental health challenges must also be given immediate attention. Interventions that ensure older people have access to appropriate food and nutritional support through nutrition programs,

food provision and agricultural training would help maintain adequate energy levels, immune function, and mitigate potential disease spread (see: WHO, 2015). Likewise, initiatives supporting water and sanitation for the elderly, particularly those with disabilities, would alleviate sickness, disease and promote dignity. Providing rain barrels, adapting water carrying containers, and ensuring community assistance for the older population would be a good start (see: WHO, 2015). Lastly, strategies that enhance the health and safety of homes are needed to mitigate injuries and disease, enhance personal safety and improve psychological wellbeing (see: Braubach, Power, 2011). Evidence suggests that the provision of comprehensive housing adaptation packages for the elderly is not only economically favourable, but also reduces the need for formal health care (Lansley et al., 2004). As such, the Ugandan government should consider the implementation of similar strategies**.**

Overall, there is a need for future research to more fully ascertain the links between various place specific factors ― political economic, socio-cultural, environmental―old age, and health and wellbeing in Uganda. More work that examines the discursive framing of old age in different regions of Uganda would also help expose substantive grounded manifestations of ageism and counter its deleterious health effects for both current and future aging populations. Ultimately, if the Ugandan government truly wants to create a "society where older persons are living in a secure and dignified environment that fulfills their needs and aspirations" (MoGLSD, 2012, pg. 6), it must invest in addressing these aforementioned issues, particularly in areas known to be underserved. Until that time, the elderly will continue suffering deleterious impacts to their health and wellbeing.

Chapter Five

Manuscript # 3: Global discourses and local disconnects: Experiences of gender, aging, health and wellbeing in Uganda

Rishworth, A., Elliott, S.J. Global discourses and local disconnects: Experiences of gender, aging health and wellbeing in Uganda.

Abstract

The world's population is aging, and women comprise a larger share of this growth. Since older women occupy two stigmatized statuses—female and old— this combination is deemed to make them a particularly disadvantaged group. Older women in Sub-Saharan Africa (SSA) are considered to be especially vulnerable since the region has the highest rates of global gender inequality and the fastest growing global aging population. Due to this growth, it is argued that the feminization of population aging has the potential to become one of the biggest challenges to gender equality of the century. Yet, discussions about population aging uncritically assume older women are a permanent minority, ignoring the possibility that the direction of gender inequality or its absence may vary for different dimensions of wellbeing. To provide a more balanced discussion on the links between gender, aging and inequalities, this study draws on feminist political ecology and a life course perspective to examine how gendered relations of power and inequalities over the life course shape health and wellbeing in old age in Uganda SSA. Interviews with elderly men, elderly women, and key informants were conducted. The findings reveal the wellbeing of aging men and women is an amalgamation of gendered experiences and social dynamics that are (re)produced and (re)articulated across the life course. The findings expose a counter narrative to the global representation of gendered aging inequalities, illuminating how gender and age are experienced and navigated in sometimes unexpected and contradictory ways.

Keywords: aging; gender; wellbeing; feminist political ecology; life course, Uganda

5.0 Introduction

The world's population is aging, and women comprise a larger share of this growth. The UN asserts that "if not addressed, the feminization of aging has the potential to become one of the biggest challenges to gender equality of this century" (UN, WRN, 2017 pg1). Projections indicate that while older populations (60 yrs.+) will increase from 1 to 2.1 billion by 2050 globally, women will comprise a larger portion of this growth— outliving men by 4-10 years in nearly all regions (UN, 2015). While the timing, speed and scale with which aging occurs varies across and within regions, estimates signal that by 2100, Sub-Saharan Africa (SSA) will see a 13-fold increase of its older population (e.g. 56 million-716 million), with women constituting 58% of this growth (UN, 2015).

The growing numbers of seniors in SSA raises challenges for this population, considering they already have the highest global burden of disease, disability and unhappiness (Steptoe & Deaton, 2015; WHO, 2015). Furthermore, it raises challenges for elderly women since SSA has the highest rates of gender inequality in the world (Gap, 2017; UNDP, 2016). International organizations (e.g. UN, Global Action on Aging 2002; UNFPA) contend that because older women occupy dual stigmatized statuses —female and old— they are especially disadvantaged (Milligan et al., 2016; Calasanti, 2004).

Much of this literature, however, uncritically assumes women are permanently underprivileged, ignoring the possibility that the direction of gender inequality or its absence may vary for different dimensions of wellbeing (Milligan et al., 2016; Calasanti, 2004; Knodel & Ofstedal, 2003). The Madrid International Plan of Action on Aging, for instance, explicitly advocates for the integration of a gender perspective into all policies, programmes and legislation dealing with aging, but in the same document, states older women everywhere are a special group in need of particular policy attention (UN, 2002).

By making such sweeping assertions around female disadvantage, international commentators overlook the fact that gender is relational. Older women's inequalities are produced and re-produced in relation to men, and are situated within multiple sets of interacting relationships at the intrapersonal, interpersonal, institutional and societal levels that simultaneously constitute gendered identities and provide opportunities for their reconfiguration (Connell, 2012). Moreover, positioning women as the *de facto* group inherently 'more vulnerable' in old age, fails to consider that older men may have special needs, let alone be a group requiring understanding and policy attention in their own right (see: Milligan, et al., 2016; Calasanti, 2004; Knodel & Ostedel, 2003). Despite calls to discern the contexts where older women are disadvantaged from the contexts they are not and explore reasons for these variations (see: Calasanti & Giles, 2018; Paz, Dorn, Tur-Sinai, 2018; Knodel & Ostedel, 2003), limited work examines the relationships between aging, gender and place (see: Milligan, et al., 2016), and even then, much of this work derives from high income contexts (see: Etherington, 2016; Toni & Slevin, 2013; Arber, et al., 2003).

The few studies stemming from SSA provide variegated depictions of gendered health inequalities in old age. Mudge et al. (2009) for instance, investigate how the separation of men and women in the domestic and public spheres in early life impacts health and survival strategies during old age in Kenya. They reveal that women's participation in the domestic sphere sometimes gives them a gender advantage over men in terms of health and adaptation in old age, whereas men's engagement in the public sphere conversely gives them a gender disadvantage. In contrast, Bennett et al. (2016) examine the intersections of gender and old age survival health outcomes in Nairobi slums, revealing that contrary to the expected paradox of poorer self rated health yet better survival amongst older women, women have much poorer self rated health, worse survival and poorer circumstances (e.g. disability, socioeconomic

status) compared to men. They emphasize that the conventional female advantage in mortality only becomes apparent after accounting for the cumulative influences of individual characteristics, social networks, health and socio-economic status, suggesting the female advantage in old-age mortality does not apply to contexts where women experience significant disadvantage across multiple life domains over the life course. Similarly, Richards, Zalwango, Seeley, et al. (2013) explore how women's and men's gendered experiences from childhood to old age shape vulnerability to HIV, highlighting that while women and men are exposed to HIV through multiple and intersecting drivers during their lives and in old age, women's experiences of gender-based violence (GBV) expose them to higher risks of HIV and thus poorer health in old age.

While these studies begin illuminating the ways gender interacts across the life course to shape health outcomes in old age, older women continue to dominate academic and public policy discussions (Paz et al., 2018; Mulligan et al., 2015; Backes, Amrhein, Lasche et al., 2006). Attention often centers on women's longer life expectancy and the unequal effects longer lives have on their health and wellbeing in old age (Davidson, DiGiacomo & McGrath, 2011; Chrisler, Barney, Patatino, 2016; Westwood, 2016). Older men remain a 'blind spot', despite international commentators highlighting men's shorter life expectancy, poorer health seeking behaviour, and higher rates of isolation in old age compared to women (WHO, 2015; Cacioppo et al., 2011; Shand, et al., 2014). When gender differences in aging are considered, the focus is on describing variations between elderly women and men rather than theorizing potential reasons for these variations (Westwood, 2016; Calasanti & Giles, 2018). Even still, little attention is given to the ways that contextual experiences (e.g. employment opportunities, family responsibilities, political systems) play out temporally across the life course, with implications for health and wellbeing (Pearce, 2018).

Within the fields of health geography and geography of aging, scholars have made substantial contributions to uncovering how older people experience and create meaning for themselves in different places (i.e. home, public, community environments in high income contexts), along with their implications for health and wellbeing (see: Milligan, Payne, Bingley et al., 2013; Finlay, 2015; Milligan et al., 2007: Wiles, 2009). While the incorporation of life course perspectives (LCP) has been rather slow within these fields (see: Pearce, 2018; Skinner et al., 2015), scholars have begun elucidating its importance for capturing the precariousness, unpredictability and diversity of life courses within the context state regulations and institutionalization (Horschelmann, 2011), the variability of life experiences and diverse situated realities in old age (Hopkins & Pain, 2007), along with the ways particular social, political and employment contexts over one's life informs attitudes towards socialization and activity in old age (Milligan, et al., 2013).

This expanding focus within human geography undeniably extends insight into the spatial-temporal place processes and outcomes in old age. That said however, more work that examines the temporal dimensions of place perceptions and experiences, the ways historical processes impact upon, as well as create experiences of health and wellbeing in old age, and how the negotiation of everyday life plays out temporally are needed, as a recent disciplinary reports and other publications confirm (Skinner et al., 2015; Pearce, 2018; Schwanen et al., 2012). Moreover, consideration to the ways these processes play out in contexts outside of high-income countries have yet to be considered (Skinner et al., 2015).

We begin addressing this gap by exploring how gendered experiences across the life course shape health and wellbeing in old age among men and women in SSA. We draw on feminist political ecology and a life course perspective to shed light on how gendered relations of power and inequalities shape health and wellbeing in old age. As part of a larger study exploring dimensions of health and wellbeing

among seniors in SSA, we focus our attention on the context of Uganda to qualitatively examine these issues. In so doing, we enhance knowledge on the spatial-temporal (re)production of gendered inequalities in old age and advance theoretical insight into the ways place-based processes over time produce unique health and wellbeing realities for both women and men.

The paper begins with a discussion of the theoretical approaches informing this research. It then describes the methods used and presents key results. Following is a discussion that reveals the health and wellbeing of aging individuals is an amalgamation of embodied gendered experiences and social dynamics that are (re)produced and (re)articulated across the life course. In so doing, the findings expose a counter narrative to the global representation of gendered aging inequalities, illuminating how gender and age are experienced and navigated in sometimes unexpected and contradictory ways. The paper concludes with an assessment of how these findings inform policy and practice.

5.1 Theoretical Framing

Feminist political ecology (FPE) uses a gendered lens to examine how relations are constituted through interactions with other markers of social difference (e.g. class, race, ethnicity, age, and (dis)ability) to shape access to and control of resources within and beyond the household (Elmhirst, 2015; Rocheleau, et al., 1996). In so doing, FPE explicates how material and discursive struggles over environmental resources are often predicated on non-material processes, such as unequal social, political or economic power relations (Bryant, 1998; Elmhirst, 2015). FPE offers a way to examine the intricacies of everyday practices, meanings and spatialities that (re)produce patterns of social difference and exclusion (Trulove, 2011; Elmhirst, 2015). For example, O'Reilly (2010) details the ways sanitation projects in rural Rajasthan re-shaped gendered practices, producing new gendered ideologies and unequal gender spaces for women and men. O'Reilly finds that rather than eradicate gendered inequalities through

the provision of household latrines, women were further marginalized in the home since they were forced to seek privacy and seclusion from men in their households (O'Reilly, 2010).

Hence, by attending to the micro dynamics of access and control in place, FPE gives analytic attention to the ways gender is experienced, contested and reinforced within households and communities (Truelove, 2011). At the same time, FPE is acutely aware that any interaction within the local scale is always operating within broader socioeconomic and historical contexts (Rocheleau et al., 1996; Elmhirst, 2015). Doing this enables FPE to show how contemporary gendered configurations are always constructed in and through past processes, transformations and historical dynamics (Robbins, 2012; Rocheleau et al., 1996).

While historical analysis is a cornerstone of FPE and PE writ large (see: Blaikie & Brookield, 1987; Robbins 2012), much of this literature examines how broad macro socioeconomic and political processes in one temporal period shape subsequent macro temporal periods and attendant socio-ecological trajectories (Zimmerman & Basset, 2003). Less attention has been directed towards the historical realities and biographical identities of individuals themselves within their broader macro historical contexts. Moreover, few studies examine how individual identities co-evolve over time to generate complex biographical identities embedded within a specific socio-ecological place. Inadvertently sidelining finer temporalities in the production of gendered inequalities thus restricts analysis of how situated knowledges and practices of men and women are constituted and reconstituted over time and in place.

To begin exploring these intricacies, we draw on a life course perspective (LCP). While a LCP is highly compatible with FPE given similar considerations of macro level forces (e.g. history, culture), individual agency, and relational perspectives (see: Elder, Johnson & Crosnow, 2003), it comes with an additional strength by way of its explicit consideration of individual life course timings and trajectories

(Elder et al., 2003; Burton- Jeangros et al., 2015). A LCP encompasses four basic principles. First, it attends to the macro-level factors of history, culture and place that mold opportunities and constraints available to an individual. Second, it recognizes that individual lives are linked and therefore shaped by friends, families and others social encounters. Third, it acknowledges that while individuals are agentic actors, choosing the direction of their lives, these decisions are made within a socio-cultural and politically defined set of constraints and expectations. Lastly, a LCP pays heed to the timings of particular events in the life course (i.e. turning points and transitions), along with their immediate and enduring effects on the remaining trajectory of an individual's life (Elder, et al., 2003; Burton- Jeangros et al., 2015). Drawing on FPE and LCP therefore sheds light on how relations of power and inequality over the life course shape health and wellbeing in old age.

5.2 Context

Uganda's population is divided between 4 administrative regions, and 127 districts (UBOS, 2016). The Central Region houses the largest population (27%) and is coterminous with the Kingdom of Buganda— one of the ancient monarchies constitutionally recognized in Uganda. The country is home to approximately 40 million people, of which 55% are under the age of eighteen and approximately 2-4% over the age of sixty (approx. 1,304,464, 60 years or older) (UBS, 2017). While it is the second youngest country in the world, its older population (60+) is projected to grow almost five-fold, from 1.3 million in 2010 to 5.5 million by 2050 (MoGLSD, 2012). Currently, women represent 63.2% of the elderly population, and are expected to represent a larger portion of this growth given their longer life expectancy at birth compared to men (64.8 years and 59.8 years respectively) (IHME, 2017). To address the needs of this growing older population, the Ugandan Government developed a National Policy for Older Persons

(2009) that aspires to create a "society where older people live in a secure and dignified environment that fulfills their needs and aspirations" (MoGLSD, 2012, p 6).

Over the last 25 years, Uganda has made great strides in reducing poverty (from 56% to 24.5% between 1992-2010), following a series of structural reforms, trade and financial liberalization (Republic of Uganda, 2013). Despite this reduction, between 1992 and 2010, inequalities between regions and demographic groups increased. Of all regions, the Central is the most unequal (3 times more inequitable than its regional counterparts), with rural elderly considered the poorest members of society (i.e. 98% having no form of pension, social security) (MoGLSD, 2012). These regional inequalities are exacerbated by chronic land degradation, changing rainy seasons, droughts and extreme weather conditions, affecting over 80% of the population who rely on agriculture for subsistence and income (UDHR, 2011).

In Uganda, gender plays a major role in access to and control over resources over the life course. In childhood, females are less likely to attain formal education and are more likely to drop out of school due to domestic work compared to their male counterparts (e.g. 24.1%; 9.7% respectively) (UBS, 2013). This translates into a higher literacy rate for males (77%) and has a cascading effect on the ability to secure employment and income in later life (UBS, 2017). For instance, more adult men are employed in the formal economy, often working in transportation, construction and formal agricultural sectors compared to adult women (51%; 35% respectively). Conversely, more adult women are self employed, engaging in service and elementary occupations, like subsistence agriculture, compared to men (48%; 38% respectively) (UBOS, 2017).

While both men and women are heavily engaged in agriculture, cultural norms surrounding agricultural production separate crop production along gendered lines; men take a lead role in cash crop production and generally control subsequent proceeds, where women's crops are for subsistence use,

destined for household consumption or small-scale local trade (Bergman et al., 2012). This gendered division means that men earn more across all sectors (~24 USD gap) and have a higher average household income compared to female headed households (64 USD vs. 46 USD, 2017 conversion) (UBOS, 2017).

Persistent patriarchal structures and deep-rooted negative attitudes regarding roles, responsibilities and identities of men and women mean that women are additionally responsible for maintaining and reproducing the household and community by managing a larger share of domestic labour (e.g. collecting firewood, fetching water, and caring for sick individuals) compared to men (17%; 11% respectively), spending on average 30 hours a week on unpaid domestic care work (compared to 12 hour a week for men) (UBOS, 2017). The combined productive, reproductive and community work carried out by women, often referred to as 'triple roles' (UNDP, 2015) forms the basis of Ugandan womanhood. In conjugal marital relations, men act as the household heads, the primary financial provider and sole decision maker, whereas women are the keepers of the home, responsible for rearing children, tending to subsistence crops and submitting to the control of their husband (Otiso, 2006). Some women are further subjected to physical and/or sexual intimate partner violence (Richards, Salwango, Seely, et al., 2013). More than 1 in 5 women age 15-49 (22%) experience sexual violence at some point in their lives compared to fewer than 1 in 10 (8%) men (UDHS, 2017). While legal polygamy can only exist if a man marries under customary Islamic law, in practice, many men in legally monogamous unions 'marry' additional wives. Over 25% of married women report that their husbands have multiple wives (UDHS, 2018), which creates resource competition, stress and anxiety for women who are living as co-wives (UDHS, 2018).

These experiences over the life course inform different aging realities for men and women. While more women are widowed in old age compared to men (75% vs. 23%), older men are more like to

remarry after the death of a partner compared to women (73% vs. 36% respectively) (UNDESA, 2009). Due to patriarchal inheritance practices [2], when old, women are more likely to face discriminatory practices and land grabbing, leaving many homeless and destitute (UDHS, 2018; Nyanzi, Emodu-Walakira, Sserwaniko, 2009). While all older people in Uganda are vulnerable to poverty, men's higher engagement in the formal sector when young means that they are more likely to receive some form of pension compared to women in old age (MoGLSD, 2012). Moreover, approximately 15% the households in the country are headed by an elderly individual, while 65% of these elder headed households have responsibilities of caring for children or sick (Stewart, Dall'Olio et al., 2014). Following is a discussion of the methods used in the study.

5.3 Methods

To understand how gendered life course experiences affect health and wellbeing realities in old age, we adopt an interpretive case study approach that included in-depth interviews (IDIs) with elderly women and men and key informants (KIs). The approach keeps to the methodological tradition of political ecology and enables work across scales, emphasizing local groundedness and context while embedding findings within broader sets of socio-structural relations (Robbins, 2011).

To explore these dynamics, IDIs (n=53) with elderly individuals (50 yrs.+ as per WHO 2015 guidelines) and KIs (n=34) were conducted in the Greater Mukono Area of Central Uganda (e.g. Mukono District, Buikwe District, Kayunga District, Buvuma District) (see: Table 5.1) (Figure 5.0) in 2018. Purposeful maximum variation sampling was used to select elderly participants and KIs. Since the sample

[2] According to customary law, widows are denied all rights to inherit land. A widow is only ensured of her continued occupation of the residential property she used to occupy with her husband, but does not have the right to control the property (see: Asiime & Crankshaw, 2011)

is not meant to be statically representative, we were able to identify information rich participants to illuminate the question under study (Patton, 2002) (see: Table 5.1). Considering most participants did not have a birth certificate to verify age, an event history calendar was used to establish relative age (see: Vanhoutte & Nazroo, 2016). This involved asking participants to map out thematic life course timelines (e.g. where born and raised, when life events occurred), key transitions (birth/death in family, marriage, construction of a church/mosque), and anchoring personal circumstances within a particular historical context or historical event (e.g. war, civil unrest, presidential rule) (see: Belli, 1998). Based on these techniques, the age range of participants varied from 50- 120 years of age.

Figure 5.0 Uganda and Uganda's Central Region

Table 5.1 Location of In-Depth Interviews

		In-depth Interview Participant Characteristics (n= 53) (% of Participants)		
District	**Age**	**Female**	**Male**	**Total**
Mukono	~50-70	3 (5.7%)	3 (5.7%)	6 (11.3%)
	~70+	4 (7.5%)	4 (7.5%)	8 (15%)
Buikwe	~50-70	4 (7.5%)	3 (5.7%)	7 (13.2%)
	~70+	3 (5.7%)	4 (7.5%)	7 (13.2%)
Kayunga	~50-70	4 (7.5%)	3 (5.7%)	7 (13.2%)
	~70+	4 (7.5%)	4 (7.5%)	8 (15%)
Buvuma	~50-70	3 (5.7%)	3 (5.7%)	6 (11.3%)
	~70+	2 (3.8%)	2 (3.8%)	4 (7.5%)

Table 5.2 In- Depth Interview Participant Characteristics

In-depth Interview Participant Characteristics (n= 53)		
	Female (n=27)	**Male (n=26)**
Female headed household	15 (56%)	—
Male headed household	—	26 (100%)
Residing with spouse	12 (44%)	19 (73%)
Raising orphaned and vulnerable children	17 (63%)	14 (54%)
Currently working (informal)	22 (81%)	20 (77%)

KIs were selected based on their ability to provide comprehensive insight into the needs of seniors and illuminate, from various perspectives, the question under study. KIs encompassed a diverse range of individuals spanning from non-governmental organizations, health care providers, to individuals in all levels of government (see: Table 5.3). Given their diverse institutional backgrounds, KIs enhanced knowledge regarding factors facilitating and impeding the wellbeing of seniors, while also enhancing insight into institutional policy discourses, priorities, and structural impediments to health and wellbeing (Lytle, et al., 2003).

Table 5.3 Key Informant Characteristics

Key Informant Characteristics (n= 34)			
	Female	Male	Total
Government: National (Focal Persons for the Ministry of Gender Labour & Social Development, Focal Person for the Department of Disability and Rehabilitation Ministry of Health, Chair and Vice Chair of the National Council for Older Persons, Minister of the Department of Elderly and Disability	2 (6%)	4 (12%)	n= 6 (16%)
Government: District (District Chairpersons of Mukono Older Persons Council, Chief Administrative Officer, District Financial Officer, District Health Officer, District Officer of Environment & Planning)	1 (2%)	5 (15%)	n = 6 (16%)
Government: Local (Town clerks, community development officers, senior development officers, chairpersons of local council)	3 (9%)	4 (12%)	n= 7 (19%)
Health Services (physicians, nurses, community health workers)	2 (6%)	5 (15%)	n= 7 (19%)
Non-Governmental Organizations (Reach One Touch One (ROTOM), HelpAge International, Uganda Reached the Aged (URA), St. Francis Health Center, Center for Health, Human Rights & Development, Providence House)	5 (15%)	3 (9%)	n= 8 (24%)
Total	13 (38%)	21 (70%)	n= 34

All IDIs were conducted either in the homes of seniors or in a quiet outdoor location. Interview guides were pre-tested for content and context by academics and local community members. Questions were informed by FPE and LCP and aimed to acquire rich information pertaining to how sociocultural, economic, environmental, and political factors experienced over the life course impact health and wellbeing in old age. A checklist of topics (semi structured and open-ended questions) guided all discussions and probed participants about several different topics related to their life histories, critical life periods and health and wellbeing. These checklists were designed to be flexible; new questions were added as necessary during the data collection process.

Since elderly women and men have lived through different experiences, the use of IDIs created a listening space where individuals could report past experiences and life histories in relation to their

current situation (Miller & Crabtree, 2004). This elicited rich descriptions of life histories and elucidated how multiple determinants over the life course inform gendered health and wellbeing realities in old age (Vanhoutte & Nazroo, 2016). Particular attention was given to creating a comforting environment so as to not evoke emotional distress by discussing past events. While some individuals willingly discussed painful experiences, the emphasis was placed on recollecting past experiences through amiable reminiscing. KIs helped situate seniors' experiences within larger economic and political discourses as well as environmental contexts. IDIs averaged approximately 1.5-2 hours in length while KIs lasted between 45 minutes to 1 hour in length. All IDIs and KIs were conducted in the language preferred by the participant: English, Swahili or Luganda. In order to moderate cross cultural sensitivities, a research assistant, born and raised in the area, holding a Master's in a health-related discipline, was hired to assist in the translation. All IDIs and KIs were audio-recorded with consent. The study received ethical clearance from the first author's academic institution (#22326).

Data Analysis

All IDIs conducted in Swahili/Luganda were simultaneously translated into English during data collection. Digital recordings were then transcribed verbatim by the first author and proofread for accuracy by both authors. All data was then thematically analyzed using NVivo 11 (QSR International). Thematic data analysis was guided by the research objectives and theoretical constructs related to gendered life course experiences, health and wellbeing. Coding was conducted line-by-line, producing textual elements organized into themes and subthemes (Strauss & Corbin, 1998).

Once the coding manual for each participant group was composed, interrater reliability (Miles & Huberman, 1994) and peer examination (Baxter & Eyles, 1999) were employed to enhance rigour. For each participant group, two transcripts were coded by the first author and an additional researcher. Coding

agreement for each participant group was calculated as greater than 75% (Miles & Huberman, 1994). Both inter- and intra-rater reliability were calculated at 93% agreement for IDIs and 98% agreement for KIs on 95% of the codes. Coding differences were discussed, and the revised coding manuals used to code remaining transcripts. This process facilitated inter coder reliability, promoted investigator triangulation (i.e. the use of multiple investigators in a single study to investigate the same phenomenon and compare results) (Denzin, 1978), and strengthened the credibility of results (Baxter & Eyles, 1997).

5.4 Results

The results are organized around perceptions of women's aging experience, perceptions of men's aging experience, women's wellbeing in old age, and men's wellbeing in old age. Direct quotations are used to punctuate these themes. Each quotation is identified with a pseudonym, data collection technique (i.e. IDI, KI), gender [M=male, F=female] district [MK= Mukono, KY= Kayunga, BU= Buikwe, BV= Buvuma), age group [50-70, 70+], and KI type [Government= GOV, Non-Governmental Organization: NGO, Health Provider= HP].

5.4.1 Perceptions of Women's Aging Process

When asked, almost all women interviewed reported how aspects associated with their role as homemaker and caregiver contributed to their accelerated aging (Table 5.4). This included both physiological (menstruation, birth, heavy workloads), and psychosocial (e.g. stress) factors:

> Women age faster. We have menstruation, lose blood, then we give birth. Men don't go through these things. You're expected to produce. We birth many children, six to eight times. That makes us weaker; it deteriorates our health and we age faster. Then, we start working when we're so young. We work day to night and don't have time to rest. It's the women who carries the firewood on their heads, has the child on their back and carries the hoe, but the man does what he wants. When he comes home, he just sits there and rests while we do all the other work—cook, clean, fetch water, everything. The children are crying, and he says, "go to your mother". If he brings meat home, he takes the bigger share so even feeding becomes an issue. So, its all that stress in our heads, it wears us out and we get old much faster than the men. — IDI, F, MK, 50-70

Women's gendered societal position was also highlighted as contributing to their accelerated aging. Around two thirds of the women interviewed reported both physical (e.g. gender-based violence) and psychosocial (e.g. inferiority, limited personal autonomy) factors:

> When you do something, the men don't think is right, you just get it [abuse]. The food's not ready, the house isn't right, someone's looking at you. They know how to beat the women. They have the power. You can't say anything. For me, I escaped marriage and never went back. My husband got jealous cause another man liked me. He said he'd rather kill me than have some other man take me away. One night he went to sharpen the machete to kill me. I was so scared but found a way out and ran. I never looked back. I lost my family and everything. That stress, that pain, it makes us grow old before the men. – IDI, F, KY, 70+

The majority of KIs supported the view that women's gendered roles as homemakers combined with their societal position contributed to their accelerated aging (Table 5.4):

> Women age faster but I don't think it's biological. It has a lot to do with the physical and emotional stress they go through. The women take care of the children, tend to the household, prepare the food. And even now, it's common to find a grandmother digging and coming back to cook for the orphans and doing all of the household chores and the grandfather is just under a tree listening to the radio. So they worry about so many things over the life compared to the men. Then there's the abuse. Men perpetuate these inequalities and it leads to their accelerated aging. Our society, gender norms and the value culture put on men and women don't permit him to support the women, even when you see it contributing to her decline over time. – KI, NGO

In contrast, most men did not report women's societal position as a factor contributing to their accelerated aging. Rather, men discussed how physical (e.g. menstruation, childbirth) and psychosocial (e.g. stress associated with work) factors associated with women's roles as caregivers and homemakers contributed to their accelerated aging (Table 5.4):

> The women age faster than men because they give birth a lot. That causes them to lose a lot of blood. Then they breast feed and have monthly periods. They take care of the kids, feed them, tend to the home. All this literally works them so much they wear out. That contributes a lot to their faster aging. But for men, we stay intact.– M, IDI, BU, 50+

Interestingly, whereas around three quarters of both women and men discussed women's menstruation as contributing to their accelerated aging, less than a quarter of the KIs noted this as an important factor (Table 5.4).

Then again, when asked, around a quarter of the women interviewed discussed how aspects of their gender identity contributed to a slower aging process. This included both physical (e.g. strength, endurance) and psychosocial (e.g. socialization, ability to cope) factors (Table 5.4):

> I think we age slower than the men. First, we're stronger than they are. We can go 7 days without food or drink, while they only last 3 or they die. Even though we work much more than the men, we learn to cope with hardship. We're more relaxed whereas they're stressed all the time. Us women work together, there's more socialization. So all of that makes us age more slowly. ― F, IDI, BUV, 70+

Yet, while no women mentioned their health seeking behavior as a factor contributing to their slower aging, both men and KI's reported this as an important factor (Table 5.4):

> The females have good health seeking behaviours. They usually come immediately when something's wrong compared to the men. They're able to prevent complications and slow down the aging process. Whereas men rarely come so they develop complications and end up dying so early. ― KI, MU.

Table 5.4 Perceptions of Women's Aging Experience

Women's Aging Experience	Number of Mentions (Number of participants) (% of participants)		
	IDIs		KIs
	Women's Perceptions (n=27)	Men's Perceptions (n=26)	Key Informant Perceptions (n=34)
Accelerated Aging			
Menstruation/blood loss	35 (21) (78%)	23 (19) (73%)	8 (5) (15%)
Childbirth	34 (21) (78%)	22 (19) (73%)	33 (29) (85%)
Child rearing	26 (20) (74%)	21 (18) (69%)	32 (29) (85%)
Heavier workloads (family, farming, childcare)	27 (21) (78%)	20 (19) (73%)	31 (28) (82%)
Co-wife competition	17 (15) (55%)	4 (4) (15%)	11 (9) (26%)
Lack of autonomy to make decisions	20 (18) (67%)	11 (8) (31%)	32 (29) (85%)
Gender based violence	18 (15) (55%)	9 (6) (23%)	30 (28) (82%)
Inferior position in society	20 (17) (63%)	12 (9) (35%)	32 (30) (88%)
Slower Aging			
Stronger	8 (5) (19%)	6 (4) (15%)	—
Ability to go without food for longer	6 (4) (15%)	—	—
Able to cope with challenges	10 (8) (30%)	11 (7) (27%)	10 (7) (21%)
More socialization	11 (8) (30%)	10 (7) (27%)	11 (10) (29%)
More relaxed	10 (8) (30%)	11 (7) (27%)	5 (5) (14%)
Better health seeking behaviour (women)	—	10 (7) (27%)	15 (12) (35%)

5.4.2 Perceptions of Men's Aging Process

When queried, almost all men interviewed reported how aspects associated with their role as provider contributed to their accelerated aging (Table 5.5). This included both physical (e.g. heavy manual labour) and psychosocial (e.g. stress, inability to cope) factors:

> Men get older faster. It's because we work so hard, toil so much and think so hard compared to the women. We think so hard about running the family and sustaining it. Taking care of the wives, the children. We leave very early and come back late at night. And the general conditions, like poverty and insufficient material goods at home, it affects us more than women. We think a lot about how to provide for everything. That's why we get hypertension and die faster. But the

> women don't think like the men. For them, they're relaxed. They're able to cope with the lack of goods. But we worry so much, what to eat, where to get money for the family, it's our responsibility, but it causes us more stress, we age faster and die. – M, IDI, KY, 70+

While less than a third of all women interviewed reported physical or psychosocial factors associated with men's role as provider contributed to their accelerated aging process, around half of the KIs did support the view that psychosocial factors were contributing to men's accelerated aging (Table 5.5):

> Men are supposed to be strong and take care of themselves. Cause of this culture, we put them in a high position, the head of everything. Cause of that, they experience a lot of stress. They don't seek health care cause their supposed to be strong. Then the general conditions like poverty and insufficient goods at home, they don't deal with well, not like the women. They're unable to cope. They're always thinking, so that wears on them. The mental stuff really affects them, and it makes them age faster – KI, NGO

In contrast, a third of the men interviewed reported how physical factors (e.g. manual labour, physical strength) associated with their role as provider led to a slower aging process (Table 5.5):

> For us, we work outside and are always moving. Cause of the manual work, we're strong and keep fit. It's the daily exercise with work, it keeps us together, so we don't age as fast as the women. ― IDI, M, BU, 50-70

Similarly, around a third of the women and KIs interviewed supported this view (Table 5.5):

> Men are always doing manual labour, it's like exercise. It makes them stay young. For us, we fall apart but them they stay intact. They don't loose anything in life except for sweat and hot air. – F, IDI, MU, 50+

While only around a quarter of the men interviewed reported that their gendered identity gave them an easier life and contributed to their slower aging process, around three quarters of the women reported this as an important factor (Table 5.5):

> Men work outside the home, they jazz [socialize] with other men in town and do what they want. For us, we work all day fetching water, cooking, tending to the kids. They [men] come home and stop working, but for us, we work morning, day and night, and don't stop. If food isn't ready, he

won't help. It the kids need something; he won't do it. He just does what he wants. They have easier lives than us. So that makes them age slower than us. — F, IDI, KY, 70+

Table 5.5 Perceptions of Men's Aging Experience

Men's Aging Experience	Number of Mentions (Number of participants) (% of participants)		
	IDIs		KIs
	Women's Perceptions (n=27)	Men's Perceptions (n=26)	Key Informant Perceptions (n=34)
Accelerated Aging			
Heavier workloads outside home	10 (8) (30%)	28 (23) (88%)	13 (11) (32%)
Greater burden to provide for family (financially, sustenance)	4 (3) (11%)	27 (24) (92%)	14 (12) (32%)
Heavier manual labour	7 (5) (19%)	26 (23) (88%)	18 (14) (41%)
Inability to cope with material deprivation	9 (6) (22%)	23 (20) (76%)	26 (21) (62%)
Interact less frequently with health services	—	—	28 (24) (71%)
More psychosocial stress	6 (4) (15%)	22 (19) (73%)	25 (21) (62%)
More physical stress	7 (5) (19%)	20 (18) (69%)	16 (14) (41%)
Mental instability	10 (8) (30%)	7 (6) (23%)	21 (18) (53%)
Slower Aging			
Stronger	6 (4) (15%)	12 (8) (30%)	13 (13) (38%)
Physically intact	17 (14) (52%)	14 (9) (35%)	9 (11) (32%)
Ability to exercise	13 (10) (37%)	11 (8) (30%)	10 (8) (24%)
Easier life	23 (20) (74%)	9 (7) (27%)	17 (13) (38%)

5.4.3 Women's Wellbeing

When asked, around half of the women interviewed reported how aspects of their gendered identities as caregivers and housemakers contributed to positive experiences of wellbeing in old age. This included both role continuity (e.g. continue with normal life, resourcefulness) and psychosocial (e.g. social support, collaborative relations) factors (Table 5.6):

> Old men are far worse than us. Once they stop working, they lose their minds. But for us, we keep doing what we've always done. We don't have to stop our lives. We keep farming and selling small things. We know how to make something out of nothing. For us at this point, since we've learned to deal with so many things, the problems that come with aging, we manage fine. The lack of funds, food shortages, water, we're more resourceful. We support one another. It

> helps us and provides some comfort. So, the bad things before makes us stronger when we're old. For the men now, they can't cope. – IDI, F, MK, 50-70

Similarly, a third of KIs supported this position (Table 5.6):

> I see women as much better in old age. They keep their same tasks. They're always able to sell some eggs or some weaving. Whereas the men, they don't know what to do. They become isolated. But the women, they're always engaged with one another, their more social so I see their wellbeing is better in old age.

Interestingly, around half of the women reported aspects of their inferior gendered societal position contributed to a positive sense of wellbeing in old age. This included physical (e.g. gender-based violence) and psychosocial (e.g. limited autonomy to make decisions) factors:

> All those bad things we lived though when we're young, the beatings, the lack of choice, it gives us a better wellbeing when we're older. We've lived through so much and we're stronger cause of it. We learn to cope. It gives you some inner strength. So now I think my wellbeing is much better in old age. And the kids help us much more, with money and goods. But the men, they're much worse. When they're old they lose their power. – IDI, F, BV, 70+

When asked, none of the KIs reported that women's inferior societal position contributed to a positive sense of wellbeing in old age.

Yet, alternatively, around half of the women interviewed reported aspects of their gendered identity as caregivers contributed to negative experiences of wellbeing in old age. These related to psychosocial (e.g. stress, anxiety, emotional deterioration) factors:

> It's all the stress we live though, it drains us when we're old. The men have better lives than us old women. I think it's because all the hard times us women live though. All the household stuff, working, marriage problems, it wears on our minds. It causes so much stress and it builds up when you're old, so it drains you. By the time you're old, you end up thinking life's a waste. – IDI, F, BU, 70+

Women's inferior societal position was also indicated as contributing to negative experiences of wellbeing in old age. Around three quarters of all women interviewed reported factors related to

sociocultural gender norms and practices (e.g. gender-based violence, inheritance practices, marital practices) (Table 5.6):

> Our wellbeing is bad in old age. We've lived through so much hardship. The men beating us, controlling what we do. It wears on you over time and you're just drained. Then, we normally live longer than men and that causes more problems. You think things were hard before? When our masters [husbands] die, that's when it gets worse. Our property gets taken by the children. We have no control. So you become a squatter on your own land. When he goes [husband dies], you literally loose everything. So, women really suffer when they're old cause of these inheritance issues. And on top of that, women can't re-marry when we're old. It's not accepted. But for the men, they remarry very quickly and often a young one [women]. So, you're left on your own, with no property or companionship. Women really suffer. – IDI, F, KY, 70+

Around two thirds of all KIs supported this view (Table 5.6):

> Women are marginalized in every sphere when they're young. They grow up and it's still the same. The burdens of the household, the children, the fees, cooking, cleaning, the abuse. The list goes on. So, all that combines over time. When they're old, they're so worn. They're tired, they're deflated. They're wellbeing is just so bad. – KI, GOV

Table 5.6 Perceptions of Women's Wellbeing in Old Age

Women's Wellbeing	**Number of Mentions (Number of participants) (% of participants)**	
	IDIs (Women) (n=27)	**KIs (n=34)**
Wellbeing is better	16 (13) (48%)	10 (11) (32%)
Able to continue normal life	17 (14) (52%)	21 (19) (56%)
Able to cope with challenges	16 (14) (52%)	20 (18) (52%)
Gender based violence (GBV)	15(12) (44%)	—
More resourceful	16 (13) (48%)	22 (20) (59%)
Collaboration	17 (14) (52%)	23 (22) (67%)
Psychosocial support	16 (14) (52%)	24 (21) (62%)
Wellbeing is worse	18 (14) (52%)	28 (23) (68%)
Lifetime of stress	18 (15) (56%)	26 (20) (59%)
Drained	16 (14) (52%)	24 (21) (62%)
Emotionally weak	14 (13) (48%)	22 (19) (56%)
Negative thoughts	13 (12) (44%)	13 (12) (35%)
Gender based violence (GBV)	17 (14) (52%)	31 (24) (71%)
Patriarchal inheritance structures	23 (19) (70%)	30 (26) (76%)
Inability to secure land title	22 (20) (74%)	26 (23) (68%)
Homeless	17 (15) (56%)	22 (19) (56%)

Inability to re-marry	23 (19) (70%)	19 (18) (53%)

5.4.4 Men's Wellbeing

When queried, less than one third of all men interviewed reported aspects of their gendered identity as provider contributed to a positive sense of wellbeing in old age. Factors included their established family position and family respect (Table 5.7):

> When we grow older, we're respected as the head of the household. The family treats you well. They bring you food, take care of you. And the wives are so good. They baby you. Whenever I want anything, she'll bring it for me, milk, good, we're treated like a baby. It's so perfect. We're [men] well when we're old. – M, IDI, KY, 70+

Yet, over half of the KIs supported the view that men's wellbeing was positive in old age, reporting factors associated with their family and societal position contributed to positive outcomes (Table 5.7):

> Men in our society are respected when their old. They're the senior of the house, the family caters to them, community respects them. They have a good life then get all these benefits in old age, so I think their wellbeing is just fine. We shouldn't be concerned with them. It's the women who really suffer. That's where the focus should go. Being a women and old makes you really suffer. ― KI, GOV, KAM.

Then again, over three quarters of the men interviewed reported how factors associated with their gendered identity as provider contributed to a poor sense of wellbeing in old age. Discussions revolved around aspects of employment (e.g. restrictive employment laws) and psychosocial factors (e.g. social isolation, loss of identity, family abandonment) (Table 5.7):

> When you get old, they [employers] just sack you. They think you're just useless when you're old so they force you out. But we still want to work. That's what we've always done, that's all we know. It's supposed to be our responsibility to bring in income, but in old age, we can't. No one will hire you. The available jobs require manual work for the young and we can't do that. And we can't do women's work like weaving or selling eggs. It makes you feel so worthless; you lose your identity. You don't see your colleagues anymore so you're just on your own. And on top, the

> kids never come to see us. Some even take our wives away and then you're just really isolated. All of that hurts. Our wellbeing is no good. – IDI, M, BU, 50-70+

To cope, over half of the men reported depending on alcohol (Table 5.7):

> I think so much about my problems now, it causes stress. Now I drink waragi [local alcohol] to cope. I do it to manage my mind and sleep. Otherwise I'd be thinking I'm worthless all the time. That I can't manage my life. – IDI, M, KY, 50-70+

Large discrepancies were found between men's perceptions and KIs perceptions of men's wellbeing. Less than half of all KIs interviewed reported men's wellbeing was poor in old age. Of those KIs who did report a poorer wellbeing among men, they discussed men's shorter life expectancy and family abandonment as contributing factors: (Table 5.7):

> The men have shorter life expectancies here. I don't know if it's biological or cause of their lifestyles but that contributes to their poor wellbeing in old age. Because they know they'll die young. Then there's the issue of families abandoning them. What I see happening is that because of polygamy, a child grows up seeing him [father] with multiple wives. They see him abusing the mother, hurting her. So they develop a negative attitude and resentment to the father because he mistreated the mother. They grow up and think it's time to give back and pamper the mother. They take her from the village and bring her to the city and care for her. They don't care about the father. They think he can survive, but in old age it's different. Those polygamy issues are no more. The man wants to stay close to the original wife cause they understand each other, their stories match. But the children withdraw the wife. It's so stressing for him cause he loses his partner. He's by himself so he gets depressed, he's further isolated. They become more vulnerable. It's a big problem that no one talks about. – KI, NGO

Interestingly, while two thirds of all men interviewed reported that family abandonment contributed to their poorer wellbeing in old age, none made the link between their gendered action in their earlier lives with their current experiences of poor wellbeing in old age.

Table 5.7 Perceptions of Men's Wellbeing in Old Age

Men's Wellbeing	Number of Mentions (Number of participants) (% of participants)	
	IDIs (Men) (n=26)	KIs (n=34)
Wellbeing is better	9 (6) (23%)	22 (21) (62%)
Respected by family/community	11 (9) (35%)	20 (18) (53%)
Special treatment from wife	15 (13) (50%)	20 (18) (53%)
Wellbeing is worse	24 (20) (77%)	14 (13) (38%)
Restrictive employment laws	20 (16) (62%)	17 (13) (38%)
Perceived uselessness	21 (19) (73%)	13 (11) (32%)
Loss of identity	22 (19) (73%)	12 (10) (29%)
Alcohol dependency	18 (16) (62%)	19 (16) (47%)
Socially isolated	23 (20) (77%)	14 (12) (35%)
Mourn prior life	19 (17) (65%)	11 (8) (24%)
Loss of fellowship	18 (15) (58%)	15 (12) (35%)
Shorter life expectancy	18 (15) (58%)	29 (25) (74%)
Inability to cope with financial adversity	17 (16) (62%)	20 (17) (50%)
Polygamy	–	21 (18) (53%)
Family abandonment	21 (18) (69%)	23 (21) (61%)

5.5 Discussion

This study demonstrates the ways life course histories of both women and men shape health and wellbeing in old age. By attending to the spatial and temporal experiences of women and men, the study reveals how the health and wellbeing of aging individuals is an amalgamation of embodied gendered experiences and social dynamics that are (re)produced and (re)articulated across the life course. Focusing on the micro politics of everyday aging experiences exposes a counter narrative to the global representation of gendered aging inequalities, illuminating how gender and age are experienced and navigated in sometimes unexpected and contradictory ways.

Foremost, the findings reveal clear differences in perceptions surrounding the gendered aging experience. In one regard, the fact that most women identified how physical and psychosocial factors

associated with their identity as caregiver and homemaker contributed to an accelerated aging process supports the notion of cumulative disadvantage, whereby women's inequalities in risks, resources and opportunities accumulate over the life course, resulting in an accelerated aging (see: Elder et al., 2003; Dannefer, 2003). As the results reveal, the gendered division of labour when young, together with women's lifelong engagement maintaining and reproducing the household and community sphere, increases their bodily pains, exacerbates long term psychosocial stress, and accelerates the aging process. In Uganda, where household resources and responsibilities are split along gendered lines – men are expected to provide financially for the household and given societal leeway for personal spending, whereas women are expected to direct earnings and personal time to the needs of the household— the results suggest women's persistent and prolonged experiences of inequality intensify their aging process (see: NPA, 2017).

Still, the fact that over half of the women identified their inferior societal position and experiences of gender based violence (GBV) (i.e. physical, sexual and psychological forms) as contributing to an accelerated aging process shows how living in an environment where gender inequalities are legitimized and sustained by sociocultural and institutional structures, has long term physical and psychosocial implications in old age (see: Nyanzi, 2009). While it is important to note that gender constructions within the Buganda culture have shifted over time, with females challenging their 'inferior', 'passive' position whenever opportunities arise, male-dominance and patriarchal systems that permit GBV remain the norm (Nannyonga-Tamusuza, 2009). Considering prior research indicates women who enter older years with a history of current or past experiences of violence and abuse suffer persistent health problems (e.g. chronic pan, depression, disability) (see: Krug, Dahlberg, Mercy, 2002), the long term implications of GBV in the Central Region may be devastating for older women, especially since

58% of women and 44% of men in Uganda believe GBV is acceptable (UNDP, 2015). These figures likely help explain why so few men recognized women's inferior societal position as a factor contributing to an accelerated aging process.

An interesting finding surrounding women's aging process was that both women and men, but not key informants, recognized menstruation as a dominant factor contributing to women's accelerated aging. In the context of Uganda, where menstruation is associated with poor physical (e.g. irritation, headaches, stomach pain, urogenital symptoms) and psychosocial (e.g. shame, insecurity, anxiety and stigma) wellbeing, along with high rates of educational absenteeism and drop out among girls, it is plausible that both women and men perceive the totality of these experiences over time to accelerate women's aging process (see: Miiro, Rutakuma et al., 2018; Hennegan Dolan, Wu, et al., 2016). Since negative experiences of menstruation when young have been found to undermine sexual negotiation and self-esteem during adulthood (see: Schooler, Ward, Merriwether et al., 2005; Stubbs, 2008), the consequences of menstruation in old age are likely exacerbated. Yet, as the findings indicate, the long-term impacts of menstruation and menopause are a neglected issues in public policy, as corroborated by other studies in SSA (see: Aboderin, 2014).

Examining men's aging processes exposed another set of issues. In one regard, the fact that most men identified how physical and psychosocial factors associated with their role as provider contributed to their accelerated aging process aligns with the notion of cumulative disadvantage, but points to a different set of gendered factors deemed to facilitate their accelerated aging. As the findings indicate, men's involvement in strenuous manual labour, combined with the psychological stress of upholding their masculine identity as household provider (see: Guloba, Ssewanya, et al., 2018), accumulated over their lives to manifest in poor health outcomes (e.g. hypertension), accelerated aging, and earlier death. These

findings support literature that reveals men's occupational physical activity in manual labour (e.g. construction, cleaning, farming, manufacturing) increases the risk of cardiovascular disease and mortality outcomes, even after controlling for socioeconomic status and other health behaviours (see: Holtermann, Krause, van der Beek, et al., 2018; Li, Loerbroks, Angerer, 2013). This underscores a potential public health issue, given men's poor health seeking behavior in Uganda (UBS, 2017).

In contrast, the fact that most women did not perceive these factors to be associated with an accelerated aging process for men is interesting and suggests that in the Ugandan context ―where societal organizations affirm a gendered division of labour, authority and status which largely serves to privilege men (Nyanzi, 2009)― women likely perceive men's involvement outside of the home as an luxury, absolving them of household responsibilities and bequeathing them the freedom to travel and socialize in town. This likely helps explain why most women in this study perceived that men had an easier and a slower aging process when compared to themselves.

Examining the life course experiences of women and men further exposed how gendered relations of power and inequalities experienced over time shaped contradictory experiences of wellbeing in old age. In one regard, the finding that half of the women identified how factors associated with their identity as caregiver and homemaker― continuation of normal life, ability to cope, resourcefulness ― contributed to positive feelings of wellbeing in old age supports the concept of role continuity (see: Atchley, 1989) whereby older women are able to maintain similar activities, behaviours, and relationships into old age, which in turn enhances their wellbeing. In the context of the Central Region, where the gendered configuration of space when young and during adulthood, prescribes heavier workloads for women, the findings suggest women's lifelong engagement in the domestic sphere provides them with the

ability to cultivate strong social ties with other women and community members, which when old, appears to confer unique wellbeing advantages.

This finding supports previous work from Kenya and South Africa that shows since women's roles are tethered to the household, they are better able to form strong ties with other community members that afford them economic and social security in old age (Mudege, et al., 2008; Harling, Perkins, Gómez-Olivé et al., 2017). It also helps explain why social networks have a positive indirect effect on older women's subjective wellbeing in the Central Region (Rishworth, Elliott, Kangmennaang, 2019). Also, of importance, is that while women's caregiving roles for children heightened their daily workloads during adulthood, the findings suggest these responsibilities positively augmented their wellbeing in old age, through the provision of financial and social support from their children. This supports research from Uganda, albeit in the context of HIV/AIDS, that shows those with larger caregiving responsibilities more frequently received financial and physical support (Mugisha et al., 2013).

Unexpected was the finding that women's inferior societal position and experiences of gender-based violence over their life was reported to enhance wellbeing in old age. As the results reveal, although women's personal autonomy and wellbeing during their earlier years was severely restricted due to men's exertion of power through forms of GBV, women's ability to cope with these stressors over their lives, conferred 'inner strength', which when old, resulted in positive experiences of wellbeing. This mirrors other findings that show despite experiencing sexual victimization, women's interpersonal and emotional competence, spirituality, and support from wider social environments enable positive adaptation that improves psychosocial wellbeing (Mackinnon & Derickson, 2013). While it may be true that resilience to GBV can enhance wellbeing in old age, women's resilience alone is just a temporary solution for the symptoms of stress and suffering rooted in unequal structural conditions—poverty,

economic insecurity, policies and legal frameworks, gender norms condoning violence, social constructions of masculinity and femininity, etc. — that ultimately must be addressed. Simply accepting that women's resilience to GBV will enhance wellbeing in old age will do no good in the long term, as it only serves to reproduce the wider social and spatial relations that produce gendered inequalities in the first place (Mackinnon & Derickson, 2013).

In contrast, the fact that half of the women identified factors associated with their gendered identities as caregiver and homemaker — heavier household workloads, psychological stress — as detrimental to their wellbeing in old age shows how exposures to acute and chronic social, economic, and gendered stressors accumulate over the life course, negatively impacting wellbeing in old age (see: Elder, 2003; Dannefer, 2003). This buttresses findings from Kenya (Bennet, 2016), that shows the cumulative influence of individual characteristics, health and socioeconomic status over the life course undermine women's health and wellbeing. Equally, the fact that around two thirds of all women identified aspects related to their gendered social position— GBV, inheritance structures, marital systems— as detrimental to their wellbeing in old age illustrates how gender identities of disadvantage are constituted and reconstituted over time to (re)produce deleterious impacts on health and wellbeing (Connell, 2012).

First, the impacts of violence and abuse (e.g. physical, sexual, psychological) on wellbeing in old age illustrates how cultural expectations about women's and men's roles become reinforced over time through violent means, that emanate in poor experiences of wellbeing in old age. This finding echoes Richards et al (2013) work in Uganda that highlights how cultural management of gender roles permit men to take advantage of their more powerful position in marital and sexual relations. Second, the prominence of inheritance structures in discussions of poor wellbeing in old age aligns with prior work from Uganda which shows how statutory and patriarchal customary laws prevent women from inheriting

property upon the death of the husband (Asiimwe & Crankshaw, 2011). As indicated in the findings, inheritance practices mean women often inherit no property, despite the fact that they contribute to the home through their unpaid labour during their lives. This finding reflects how different levels of agency, both women and men experience in key domains over their lifetimes (i.e. access to employment, education, power, prestige), have consequences in old age; oftentimes positioning women without access to shelter, personal possessions nor the ability to live a dignified life in old age (see: Nyanzi, et al,. 2009).

It is important to note that this situation continues to occur, even though the Uganda government implemented statutory laws governing inheritance matters (e.g. the 1995 Constitution, and Succession Act), that aim to provide women the right to inherit property and address customary laws when men die intestate (Wagubi, 2003). Considering women are only able to legally acquire 15% of their entire estate, yet are still habitually bypassed as property continues to transfer though the male line (Asiimwe & Crankshaw, 2011), the implications of inheritance structures for women's wellbeing in old age will continue to be profound, unless adequate steps are taken to address their legal rights (Nyanzi, et al., 2009).

Third, the fact that women's inability to marry in old age was found to negatively impact wellbeing speaks to the gendered experiences of widowhood in Uganda (see: Nyanzi, et al., 2009). As the results reveal, the fact that widowhood meant women were unable to re-marry and were thus left lonely in old age due to socially prescribed norms surrounding marriage demonstrates how societal expectations ― allowing widowers to remarry immediately after the death of a wife, but condemns widows from doing the same ― affects wellbeing in old age (see: Nyanai, 2009). This finding supports other literature from Uganda that reveals loneliness after the death of a spouse is one of women's biggest challenges (Nyanzi,

2011). It also underscores how age and gender interact to further undermine women's wellbeing in old age. In the context of Uganda, where post-menopausal women are deemed less sexually appealing than younger widows due to their presumed infertility, older women are further stigmatized because of heteronormative ideals which link marriage with procreation (Nyanzi, 2011).

Examining how life course experiences shape wellbeing of elderly men brought forth a different set of issues. In one regard, while only a quarter discussed how aspects associated with their role as provider contributed to enhanced wellbeing in old age, the results do point to the ways men's superior position within the household intersects with increasing age to accrue additional wellbeing benefits, underscoring the historical and traditional place of respect held for elderly men in Uganda (MoGLSD, 2012). It also shows however, how men's enhanced wellbeing is intrinsically tied to the expectations of older women to uphold their caregiving position. As others indicate, cultural beliefs about 'maternal instinct' and men's 'natural' roles as breadwinners have led to assumptions that women are better suited to daily care (Cancian & Oliker, 2000). Hence, older women may see caring for their aging or sick husband as a continuation of 'wifely duties', as it fulfils their routine family expectations and obligations (Schatz, & Ogunmefu, 2007). Considering women in this study did not mention their ongoing child rearing responsibilities in relation to their current wellbeing (Table 2), it is plausible their additional rearing responsibilities are normalized as an extension of their earlier 'mothering' responsibilities, despite possibly restricting (Schatz & Seeley, 2015) or enhancing (Schatz & Ogunmefun, 2007) wellbeing in old age.

Yet, in another regard, the fact that the majority of men identified how aspects associated with their role as provider— employment laws, identity loss, social isolation— negatively impacted their wellbeing is interesting and runs contrary to the dominant international discussion on wellbeing in old age

(see: UN, Global Action on Aging 2002; UNFPA). As the findings reveal, while men were socioeconomically advantaged during their earlier years as both household head and provider, becoming old and losing the ability to engage in formal employment due to restrictive employment laws seems to be creating a situation where men are unable to accede to the notion of manhood (e.g. tied to strength, ability to work manually, participate in activities in public spaces). This in turn, is leading to a loss of identity, emasculation and social isolation whereby men's prescribed gender identities are renegotiated and re-articulated over time in contradictory ways (Butler, 1990). As indicated in the findings, although men recognized some economic options were available (e.g. weaving, selling eggs), socially constructed gendered norms surrounding employment means men would not engage in 'women's work', even if it meant accruing some financial and social support. This situation is likely exacerbated by men's childrearing responsibilities (Table 2) due to their inability to provide for dependents (see: Schatz & Seeley, 2015).

This finding speaks to the notion of the 'roleless role', whereby when people grow older, they experience an absence of well-articulated, age appropriate expectations and standards of behaviour by which to structure everyday life (Grotowska, 2014). Comparable to findings from Kenya (Mudge et al., 2009), these results highlight how the loss of formalized employment for men in old age leads to despondency and isolation, and further helps explain why economic status has a positive indirect relationship on subjective wellbeing for old men in Central Uganda (see: Rishworth et al., 2019). The findings also underscore how old age and gender intersect to further challenge men's wellbeing. In the context of Uganda, where employment policies exclude those above the age of sixty from seeking formal employment due to their presumed futility (MGLSD, 2012), older men are further stigmatized from their younger counterparts in employment opportunities.

What is concerning is that these gendered aging dynamics appear to be fashioning an environment where older men are turning to alcohol to cope with their loss of identity and changing realities. Considering prior research in Uganda has found men are both less likely to receive financial assistance from children (see: Mugisha et al., 2015) and are more likely to experience loneliness in old age compared to women (Nzabona, Ntozi, Rutaremwa, 2016), these findings underscore an important public policy issue, especially since loneliness in old age is linked to a host of consequential health outcomes (e.g. high blood pressure, cardiovascular disease, cognitive decline, depression, mortality) (see: Hawkley et al., 2010).

The clear disconnect found between men and key informants regarding the wellbeing of elderly men is disquieting considering most men perceived themselves to be in a poor condition. While older men may not experience the same challenges that older women endure, the psychosocial impacts (distress, dysfunction, isolation) associated with their aging do warrant policy attention because they are producing negative consequences for their wellbeing, evident in their problematic coping (i.e. drinking, isolation). What is important to note is that the key informants who did suggest men had poorer outcomes of wellbeing in old age made connections between men's exertion of violence in earlier years, family abandonment, and social isolation. As indicated in the results, men's advantaged societal position in their earlier years, enabled them to exert their agency over women through violent acts and the acquisition of numerous wives under traditional polygamous practices (Nyanzi, 2011). Yet, when they became old, their children resented them for the mistreatment of their mothers and thus removed the mother/wife from the home to care for her, thereby leaving the man/husband in isolation. While this does not occur in all situations, it echoes calls from Richards et al. (2013) and points to the importance of examining the long-term implications of both survivors and perpetrations of GBV in old age. Since elderly men in the study

did not make the connections between their exertion of power, family abandonment and poor wellbeing in old age, more attention should be given to examining the potential long-term implications of the GBV.

5.6 Conclusion

By exploring how gendered experiences across the life course shape the wellbeing of elderly women and men in old age, this study brings forth new insight regarding the spatial-temporal (re)production of gendered inequalities and illuminates how place- based processes over time produce unique wellbeing realities for both older women and men. Merging FPE with a LCP provides a nuanced understanding of how gendered relations of power and inequalities over the life course produce diverse experiences of wellbeing in old age. Paying heed to both micro and macro temporalities enables the exploration of how particular events, transitions and periods over the life course, such as the abundance and/or scarcity of resources, social connections, and responsibilities, have both immediate and enduring impacts on gendered health and wellbeing in old age (Elder et al., 2003; Burton- Jeangros et al., 2015). Hence, illuminating the multiple sociohistorical threads woven within the historical narratives of women and men reveals the complex ways gendered experiences over the life course, and in old age, emerge from the intertwining of different identities situated in place (Calasanti & Giles, 2018). Integrating these two frameworks thus provides a way to examine how dialectical relationships between broad macro systems of inequalities in access to and control over resources, roles and responsibilities (re)shape gendered advantages and disadvantages, that can become reconfigured over time and space in unexpected and contradictory ways (see: Calasanti & Slevin, (2013).

Considering that other scholars highlight the need for intersectional analysis to explore how gender and age interact with other social factors over the lifetime (see: Calasanti & Giles, 2018; Calasanti & Slevin, 2013), more work needs to examine how gender relations over the life course, along with the

struggles to enact gender in later life, play out in the context of age inequalities. Future research that examines these dynamics, along with its effects on the lives, health, and wellbeing of older ages in diverse geographical contexts would go along way to rectify some of the misconceptions around gender and aging.

In the context of Uganda, these findings suggest that despite having a National Policy for Older Persons, the government is ineffective in reducing inequalities among women and men in old age. To begin addressing these deficiencies, the government should begin implementing pension systems and financial support mechanisms to reduce economic insecurity related anxiety and stress (WHO, 2015); develop social support systems to alleviate social isolation, especially for men (Mudge et al., 2009); establish links between the elderly, particularly older women, and paralegal services to uphold justice, ensure protection, and promote security from multiple forms of abuse (Nyanzi, 20009); and enhance public health outreach for older populations in order to address age associated health issues (WHO, 2015). In the long term, policies must address the various implications of menstruation and its links to later life, enhance educational and training opportunities for girls, and develop interventions for both the victims and perpetrators of GVB (Richards et al., 2013). Taking a more balanced approach that considers the short and long-term impacts of gendered interactions across the life course is essential to promote gender equality in old age, because without addressing the inputs that promote human flourishing, strategies that focus on outcomes themselves will simply be futile.

Chapter Six

Discussion and Conclusion

6.1 Introduction

The goal of this thesis was to explore the nexus between aging, health and place in SSA, using Uganda as a case study. To achieve this goal, the research used a mixed methods approach to address the following **objectives:**

a) Investigate the relationship between age and subjective wellbeing.
b) Examine the socio-cultural, environmental and political-economic drivers of health and wellbeing in old age.
c) Examine how gender inequalities over the life course shape health and wellbeing in old age.

This chapter summarizes key findings, highlights the primary contributions (theoretical, methodological and substantive), identifies limitations and implications of the work, and offers directions for future research.

6.2 Summary of Key Findings

This thesis consists of three substantive papers (Chapter 3, 4, and 5). **Chapter 3** employed the Commission on the Social Determinants of Health Framework (CSDH) to investigate how social and structural determinants directly and indirectly shape subjective wellbeing (SWB) among the elderly and examine how this relationship differs by gender. Drawing on secondary data from the 2013 Uganda Study on Global Aging and Health, results from structural equation modelling found that age is directly associated with poorer subjective wellbeing for both men and women. This association is mediated by social and structural determinants, with the strength of these relationships varying by gender. The study

reveals intermediary social determinants have positive indirect effects on SWB in old age, whereas structural determinants have a negative indirect influence on SWB in old age.

This research contributes insights into the gendered determinants of SWB. First, intermediary social determinants (e.g. providing community support, participating in group activities, and higher number of close relatives) more strongly and positively mediate the age-SWB relationship for women. Second, structural determinants (e.g., working status, asset level, good financial status and financial improvement over the last 3 years) more strongly and positively mediate the age-SWB relationship for older men. Third, while marital status is positively and directly associated with SWB in Uganda, irrespective of age, martial status for men is more than twice as strong and positively associated with SWB compared to women. Fourth, caregiving responsibilities are negatively and directly associated with SWB for women and men but not with age. Lastly, the findings indicate that being a women is directly and negatively associated with SWB.

Chapter 4 draws on political ecology of health to qualitatively investigate the multiscale socio-cultural, environmental and political-economic drivers that shape health and wellbeing for older individuals in Uganda. The findings reveal that somewhat discriminatory and stereotypical beliefs about old age, at both institutional and interpersonal levels, and have direct and indirect effects on aging bodies in multiple domains— political-economic, sociocultural, environmental— which together become embodied in deleterious physical and psychosocial health and wellbeing outcomes.

Within the political realm, development ideologies prioritize strategies for the young and marginalize the old; denying them pensions, employment and service provision. [Note: 98% receive no form of pension, and even when seniors are supposed to receive a pension, pensions are often denied due

to corruption and bureaucratic issues. see: Stewart, 2014; Wamara, 2017]. This institutional ageism permeates society and has effects on the health system.

This results in neglect, maltreatment, and denial of health care for some elderly based on the pretense of being 'too old' and intrinsically 'less valuable' than their youthful counterparts. The results show this ageism is further connected to 'technopolitical global health discourses" that favour 'more important' health problems (e.g. maternal-child health), over the concerns of the elderly. Within the interpersonal sociocultural environment, fracturing interpersonal relationships with family and community members was found to undermine health due to the loss of both physical and psychosocial support and the additional challenges associated with caregiving.

The findings reveal three main environmental drivers of poor health. First, changing climatic conditions limit the acquisition of sufficient nutrients, reduce immunity and expose the body to an array of health complications. This is compounded by emerging environmental conditions (i.e. prolonged droughts, intensified storms, extreme heat) that are fostering contexts conducive to escalating infectious disease (e.g. malaria, typhoid). Second, unavailable and inaccessible water sources increase susceptibility to dehydration and desiccation. Due to inadequate latrines, a dearth of water and requisite sanitation, health is further undermined. Third, housing structures may produce sickness and disease (e.g. pneumonia, TB). Changing environmental conditions (e.g. increased storm frequency, winds, rains) are exacerbating these housing issues, increasing elders' stress and anxiety. These environmental health challenges persist due to policies and systems that fail to understand the local realities and daily challenges in Uganda's Central Region (UCR).

Based on these findings, a framework for understanding embodied health and wellbeing in the Central Region is developed. The framework incorporates two macro level determinants (i.e. national

institutions and global institutions), and two meso level determinants (i.e. sociocultural relationships, and environmental conditions). Both macro and meso level determinants operate dialectically to shape expressions of embodied health and wellbeing at the micro level. Together, these multiscale processes shape the aging in place relationship in Central Uganda.

Chapter 5 merges feminist political ecology with a life course perspective to qualitatively examine how gendered experiences across the life course shape health and wellbeing among older women and men in Uganda. First, the findings reveal clear differences in perceptions surrounding the gendered aging experience. In terms of women's aging process physiological and psychosocial factors associated with their caregiving roles, along with their inferior societal position and experiences of gender-based violence (GBV) contributed to their accelerated aging (as identified by women and key informants). In contrast, physical and psychosocial factors associated with their gender identity contributed to a slower aging process (identified by women). In terms of men's aging process, physical and psychosocial factors associated with their role as provider contributed to their accelerated aging process (identified by men). Key informants only identified that psychosocial factors accelerated their aging. In contrast, physical factors (e.g. manual labour, physical strength) associated with their role as provider were identified as contributing to a slower aging process (identified by men and women).

Gendered power relations over the life course shaped wellbeing in old age. In regard to women's wellbeing, half of the women identified that factors associated with their caregiver and homemaker role contributed to positive feelings of wellbeing in old age, while the other half indicated these factors contributed to poor wellbeing in old age. Women's inferior societal position and experiences of GBV were reported by around half of the women to enhance positive attributes of wellbeing, while around other half indicated these factors restricted aspects of their wellbeing. [Note: The suggestion that GVB

contributes to positive wellbeing evaluations should however be read cautiously and with qualification]. Most key informants indicated these factors restricted women's wellbeing in old age. In terms of men's wellbeing, a quarter of the men identified aspects associated with their role as provider contributed to enhanced wellbeing in old age. In contrast, most of the men identified aspects associated with their role as provider to negatively impact their wellbeing— contrary to the dominant international framing of wellbeing in old age. Yet, less than half of the key informants reported that men had a poor sense of wellbeing in old age, underscoring a clear disconnect in perceptions of wellbeing realities in old age. Key informants also underscored men's poor wellbeing (e.g., in relation to isolation from children, family contact) in old age was connected to their exertion of violence in earlier years. Overall, these findings reveal that interactions between women and men over the life course have implications for health and wellbeing in old age that are experienced and navigated in sometimes unexpected and contradictory ways.

6.3 Contributions

This thesis makes theoretical, methodological and substantive contributions, discussed in detail below.

6.3.1 Theoretical Contributions

This research makes six theoretical contributions to the literature: age as a structure of power; intersectionality; multiscale aging, health and place relationships; spatial-temporal determinants of health and wellbeing; the expansion of the WHO Commission on Social Determinants of Health Framework; and the development of a conceptual framework for understanding how health and wellbeing is embodied in old age.

First, this thesis contributes theoretical insights into age-relationality. By incorporating age as another identity of difference in political ecology (of health), this research provides insight into why researchers should recognize 'age' as another structure of power that organizes society, informs group

identities and influences access to resources (see: Lrekula, Nikander, Wilinska, 2018). As demonstrated in this research, examining the multiple drivers (e.g. social, cultural, political) at multiple scales (e.g. interpersonal, community, regional, national, global) responsible for constructing age relations, illuminates how societal norms surrounding 'age' have consequences for older populations, that directly (via allocation and distribution) and indirectly (via age discrimination and stigma) affect aging bodies. Theorizing more explicitly how different actors socially construct age relations exposes sources of age inequalities (e.g. global funding bodies, political development agendas, etc.) and provides evidence for policy recommendations that arguably hold more authority (see: Skinner et al., 2015). This adds to the emerging work on age-relationality in the geographies of aging (Hopkins, & Pain, 2007; Bailey, 2009; Tarrant, 2010).

Second, by drawing on feminism, this thesis enhances knowledge on the important intersections between older age and gender across the life course**.** By drawing on notions of intersectionality ─ the dynamic co-existence of identities and connections to systems of discrimination (Crenshaw, et al., 1990)─ this work contributes insight into the complex ways women's and men's experiences over the life course and in old age emerge from the intertwining of their various categorical memberships within systems of inequalities (Calasanti & Giles, 2015). By considering the experiences of both elderly women and men, this research adds new knowledge on the intersectional inequalities that influence later life, moving beyond simply essentializing notions of 'female disadvantage' in old age, but rather illuminating how gendered age inequalities are relational.

Third, this research enhances understandings of the multiscale relational processes that structure the age-health-place relationship. Employing a political ecology approach offers a useful way to examine

how the health and wellbeing of aging individuals emerge through their connections with other spaces and places (such as people, objectives, ideas, policies, etc.) at different scales (see: Skinner et al., 2015). As demonstrated in this research, although opportunities for health are tied to a variety of factors (i.e. social relationships, available jobs, food/water availability, etc.) operating within the micro scales of households and villages, these factors are shaped and constrained by broader socioeconomic and political processes that are constantly interacting at the macro national and global scales. By examining the ongoing processes between the context specific realities of the elderly and broader socioeconomic and political processes, this research 'scales up' analysis (see: Rishworth & Elliott, 2019) and contributes new insight into how scholars can examine the multiscale dialectical relations that structure the aging- health-place-relationship.

Fourth, this research contributes insights into the spatial-temporal determinants of health and wellbeing. Incorporating key constructs of a life course perspective (i.e. particular events, transitions and critical periods) within political ecology's multiscale framework revealed how particular events, transitions and periods over the life course, such as the abundance and/or scarcity of resources, social connections, and responsibilities, have both immediate and enduring impacts on health and wellbeing in old age. Placing gendered age relations within a conceptual space cognizant of both multiscale (e.g. individual, community, national, international) and multitemporal processes (e.g. from childhood to old age), enhances our understanding of how gendered configurations of health and wellbeing are always constructed in and through past processes, transformations and historical dynamics that occur at both micro and macro scales. Equally, this provided the opportunity to move beyond thinking about staged chronologies and linearities associated with the lifecycle, and rather recognize the ruptures and discontinuities of life course transitions (see: Schwanen et al., 2012). This work adds to emerging

geographies of aging literature that incorporates the life course (see: Bailey, 2009; Schwanen et al., 2012; Katz & Monk, 1993) and also provides fertile ground to incorporate life course perspective within environment and health research to inform the design of evidence-based interventions for health promotion (Pearce, 2018).

Fifth, expanding the WHO Commission on Social Determinants of Health Framework (CSDH) to examine the social determinants of subjective wellbeing among the elderly, provides the conceptual space through which to examine how multiple socioeconomic and demographic determinants shape subjective wellbeing in old age. While the WHO's Global Strategy and Action Plan on Aging and Health (GSAP) offers a promising approach to enhance wellbeing in old age; "to date, it remains abstract and needs to be translated into an operational instrument" (Cesari, et al., 2018). Applying the CSDH to the study of subjective wellbeing and its determinants provides a way to begin explicating how resources and barriers in the environment determine what older people can do and value (i.e. their functional ability) and offers a framework for future researchers to operationalize domains in the WHO's Global Strategy.

Lastly, the conceptual framework (Figure 4. Embodying health and wellbeing) for understanding how health and wellbeing is embodied within the context of aging is important for identifying and understanding how multi-level factors interact to shape patterns of health. While this framework can contribute to knowledge of how seniors literally embody different environmental processes (i.e. water and food shortages, political ideologies, etc.), it also adds to literature on aging health and place in the geography of aging (see: Skinner et al., 2015) by demonstrating how multiscale factors interact to shape health in place. The empirical evidence provided by this research is important for understanding how macro level factors interact with local environments to generate patterns of health

and wellbeing. Although factors in each scale will be contextually dependent, the conceptual framework provides researchers with the ability to consider how a multiplicity of micro-meso-macro factors interact to shape health in place. Moreover, applying this framework in different contexts would offer a unique opportunity to illuminate similarities and differences in the multiscale aging in place experience ─ a gap identified in the geography of aging literature (see: Skinner et al., 2015).

6.3.2 Methodological Contributions

This research makes four methodological contributions to the literature. First, this research demonstrates how to explicitly use theory to inform the research design, data collection and analysis. As indicated in Chapter 1, I searched the health geography and geography of aging literature in order to identify empirical, conceptual and theoretical knowledge lacunas to judge the strengths and weaknesses of the current knowledge (see: Krieger, 2011; Meyer & Ward, 2014). In so doing, I was able to identify methods that had (not) been previously used in the field (i.e. iKT, oral history), relevant critiques of the conceptualization and application of theory, and calls for future research not yet been conducted (i.e. paucity of work outside 'Western' high income contexts, a lack of theorizing multiscale processes, a dearth of life course, gender, age analysis). I then explicitly drew on theoretical approaches that would allow me to explain how and why multiscale and multitemporal factors shape health and wellbeing (see: Meyer & Lunnay, 2013; Cresswell, 2006). Considering theoretical concepts are at a higher level of abstraction than the specific facts and empirical data about a phenomena (Punch, 2000), I developed a conceptual framework to operationalize my theoretical approaches and inform the choice of methods to guide data collection and subsequent analysis (Meyer & Ward, 2014). For instance, drivers of health and wellbeing were broken down into the multiscale (e.g. socio-cultural, economic, political, ecological, etc.

at the individual, community, national, regional, global) and multitemporal components (i.e. potential factors from childhood to old age) that drive health, previously identified in the literature.

Following this, I posed well conceived questions, amendable to both quantitative and qualitative approaches to generate comprehensive answers capable of filling some of the empirical, conceptual and theoretical gaps identified in the literature review (Krieger, 2011). During both quantitative and qualitative data collection and analysis, I constantly compared the data collected back to the theory and empirical research, asking myself whether the research questions were allowing me to investigate the theoretical and empirical gaps previously identified. Using the CSDH framework provided a structured way of analyzing and explaining the quantitative results in Chapter 3. Moreover, using a political ecology approach provided a guide to analyze qualitative data, giving meaning to the emerging results, while also allowing me to move the analysis beyond the theoretical frame to examine data that emerged from the research (Chapter 4 and 5). To do this, I coded deductively, guided by the conceptual and theoretical approaches. I then coded inductively, examining words, concepts and themes beyond the theoretical frames (Layder 1998). Following this, I grouped the codes thematically and organized them around the theoretical frames. Codes that went beyond the theoretical frames were grouped into 'other' categories.

Lastly, drawing on critical realism, I used abductive inference. Abduction required me to think conceptually and to ask questions between the data and theory in order to develop explanation (Bryman, 2012). For instance, in Chapter 4, by examining the data in relation to tenants of political ecology, I was able to put forth an explanation of how and why ageism and its associated processes deleteriously impact health and wellbeing realties of elderly Ugandans. These three forms of inference allowed me to use theory in my research design, data collection and analysis. The use of theory to inform data collection and

analysis is particularly important given recent calls and emphasis to move away from "blind observation" to theoretically informed research (Aboud, 2011; Krieger, 2011).

Second, this research provides an example of how to employ an integrated knowledge translation (iKT) approach to improve knowledge and understanding of a given phenomena (i.e. elderly health and wellbeing), as well as facilitate collaborative partnership, co-learning among all partners, and action to effect change ─ key goals of iKT (Bowen & Graham, 2013). Foremost, ROTOM's engagement in the entire research process (e.g. research inception, design, implementation, dissemination) ensured the research was contextually and culturally relevant and addressed a problem (i.e. aging and health) of importance for their organization. The co-construction of research questions, identification of research participants, and preliminary data analysis that occurred between ROTOM and myself substantially improved the knowledge generated through this research. Moreover, engaging in this iterative knowledge translation processes ── whereby (some) research activities were tailored to the context and needs of knowledge users, generated knowledge informed further action and research, which 'rotated' to feed into different research phases── helped generate information that was both important and relevant to seniors and knowledge users (e.g. NGO's, health workers, government officials, etc.) in the Ugandan context. Thus, aligned with the knowledge to action cycle, the findings from this research were translated to ROTOM and other knowledge holders. Following the translation of research findings, I engaged in many discussions with ROTOM staff surrounding the importance of research to develop informed programs and policies for the aging population. After the whole research process was complete, many individuals from ROTOM reflected to me on the importance of research for program and policy development. A key unintended deliverable from this research was that ROTOM made research for aging populations one of the strategic objectives of their organization. This new strategic objective will ensure that research for

aging populations is an ongoing and iterative process capable of effecting change (see: Table 2.6 for the adapted CCGHR partnership tools employed in the research process).

Third, this research addresses calls for methodological work that ensures research into older peoples' health, particularly in LMICs, is of relevance to knowledge users (i.e. ROTOM) and amendable to program modification and/or program development and practice (see: Ellen et al., 2017; WHO, 2016). Embedding an integrated knowledge translation framework in this research, enhanced the likelihood that the findings will be both useful and translatable into changes for programs, practices of ROTOM and other organizations associated with the elderly in Uganda (Ellen et al., 2017; Graham, 2006). Incorporating an iKT approach to research offered multiple sites of exchange between myself, ROTOM, and other community members during the research and provided explicit consideration to the translation of research evidence to knowledge holders. First, the translation of research results occurred during a day long *Aging, Health and Wellbeing Workshop* on December 6th, 2018 at the ROTOM facility in Mukono Uganda (see: Appendix D). The participants in this workshop were presented with all of the primary research results, along with aging information presented by other organizations (e.g. COHESU, ROTOM, ARCAD). This Aging, Health and Wellbeing Workshop resulted in the development of a report of key workshop findings (see: Appendix D); a long-term research agenda on aging health and wellbeing in Uganda with the potential to expand to other East African contexts; the development of relationships between knowledge users and holders; and, (although anecdotal), a greater understanding of the importance of research for program and policy development. The report also contained future research objectives on aging in health SSA and all workshop participant contact details to promote relationship building among knowledge users in Uganda and SSA more broadly. This report was sent electronically to all participants of the workshop to enhance the likelihood that the information gleaned from this research

process could assist in shaping program development and implementation. Second, a report of the key findings from this research was submitted to ROTOM in spring 2019. Third, a document comparing seniors who are supported by ROTOM and who are not supported by ROTOM was also submitted to ROTOM (in the summer of 2019) to elucidate the strengths but also some of the weaknesses of their organization. This document also comprised a discussion surrounding potential program modifications that could assist ROTOM in the implementation and support of seniors.

Fourth, this research contributes to the application of qualitative historical approaches to explore connections between people, health and place across time and over space (Andrews et al., 2006; Andrews et al., 2007; Skinner et al., 2015). First the use of event history calendars provided the ability to establish relative age ranges by mapping out thematic life course timelines (e.g. where born and raised, when life events occurred), key transitions (birth/death in family, marriage, construction of a church/mosque), as well as anchoring personal circumstances within a particular historical context or historical event (e.g. war, civil unrest, presidential rule) (see: Belli, 1998; Vanhoutte & Nazroo, 2016). Using event history calendars created an environment where participants could bring their past experiences into the present through autobiographical memories, which enhanced the recollection of complex sequences of personal events in discussions of health and wellbeing (see: Belli, 1998; Vanhoutte & Nazroo, 2016). Using this technique helped convey the cultural expressions and interpretations of people who participated in and witnessed past events, a gap identified in the geographies of aging literature (see: Skinner et al., 2015).

6.3.3 Substantive Contributions

This thesis also offers several substantive contributions. First, this research contributes to the geographies of aging literature by addressing calls to ‘uncover the geographies of aging’ that are under-researched or largely neglected in geographical studies of aging (see: Skinner, et al., 2015). Work in the

discipline largely derives from high income contexts and considers older people in terms of their mobility, residency, welfare, care and daily life in the context (Skinner et al., 2015). Though some have begun addressing issues of aging in Asian contexts (Cheng et al., 2011), or among Indigenous elderly in Canada (Wilson, 2003), aging populations in the SSA context are mostly neglected (Skinner et al., 2015). This research thus 'scaled out' analysis (see: Rishworth et al., 2019), bringing new empirical knowledge on the aging-health-place relationship in a different geographical context.

In doing so, this research enhanced substantive knowledge by bringing forth new issues pertinent to aging populations in the SSA context— sexual violence, sociocultural conflict, water and sanitation, changing climates, double burdens of disease— while enhancing knowledge on the meanings and experiences of aging in place. Shifting the focus of research to the SSA context revealed new insight into the way multiple prisms of social difference (age, gender, (in)ability) structure aging in place relations, allowing for a more self reflective and critically informed knowledge base in which to derive explanations. Moreover, explicitly examining how human and nonhuman factors, or in other words, socio-environmental aspects of place, enhanced or hindered health and wellbeing, underscores why examining these factors in tandem is important for the geography of aging.

Lastly, information gleaned from this research fills critical knowledge gaps identified by the World Health Organization (see: WHO, 2016, pg23, 24). These include identifying determinants of healthy aging (and those that lie in earlier life); developing new analytical approaches to understand and assess poor health; and facilitating interventions and knowledge translation for aging and health. Equally, disaggregating analysis (Chapter 3) by age and gender provides insight into the different determinants and

distributions of healthy aging—a key first step to understand health and wellbeing identified by the WHO (WHO, 2016).

6.4 Implications for Policy and Practice

Over the past decades, researchers, practitioners, and institutions have recognized the importance of health in older age, both in its own right, and for the instrumental benefits it provides in enabling participation in older age. Two international policy instruments have guided action on aging since 1990—the United Nations Principles for Older Persons (1991) and the Madrid International Plan of Action on Aging (2002) (UN, 1991; UN, 2002). Both recognize the right to health, highlighting the need to ensure participation, care, self-fulfilment and dignity in old age. However, a review of 133 countries shows progress to improve the health of older adults is uneven, with countries in LMICs severely lacking supportive mechanisms to ensure health in old age (WHO, 2015). As evidenced in this research, while Uganda has a Policy for Older Persons that in theory should create an environment that allows the elderly to live in a secure and dignified environment that fulfills their needs and aspirations (MoGLSD, 2009), it in practice, however, is not prioritized, funded, or given primacy in discussions of policy implementation.

Given the deficient political attention to aging and health, particularly in LMICs, the WHO, in the Global Strategy and Action Plan for Aging and Health (GSAP), called for renewed commitment and coordinated responses on aging in order to ensure that all older adults can enjoy the right to health, dignity and participation, irrespective of where they were born or live, their social or economic status, health condition or genetic inheritance (WHO, 2015). That said, mechanisms for addressing these issues in the context of the GSAP have received little attention in the literature, especially in the SSA context (see: Beard et al., 2016; 2018; Cesari, et al., 2018). Within the context of aging-health-place linkages and the findings from this thesis, possible pathways for supporting health in old age are discussed below.

6.4.1 Strengthening Social Opportunities

The results from Chapters 3, 4, and 5, provide evidence that having supportive social structures and participating in group activities enhance health and wellbeing in old age. From the models in Chapter 3, there is evidence that participation in group activities has a positive indirect influence on subjective wellbeing in old age, which was corroborated in Chapter 5. The results from Chapter 5 further reveal men have fewer social support systems in old age, which was found to undermine their health and wellbeing. Equally, the findings from Chapter 4 indicate changes to elders' family and community support systems are having negative health and wellbeing consequences for all of the elderly. It is important to note that while the issues of social support and social isolation in old age are not unique to Uganda, what makes these issues different in this context, is that they are experienced in relation to a confluence of other factors– gender based violence, child care provision, droughts, food shortages, a paucity of age appropriate health care, political neglect—that when experienced together, make the implications of social isolation particularly unique and important in Uganda. Thus, developing social support structures is crucial to enhance health and wellbeing in old age.

Within the aging literature, there is evidence that supporting social interaction can enhance older people's longevity, quality of life and protect against functional decline (Berkman et al., 2000; Ramlagan et al., 2013; Holt-Lunstad et al., 2010). Considering a poor health status, social isolation and risky health behaviour are more likely among elderly who report loneliness and isolation (Nygvist et al., 2013; De Jong Gierveld et al., 2015), strategies that promote group interactions (e.g. fellowship programs, skill development, community exercise programmes) would provide opportunities for social engagement and the development of new social ties. For instance, programs in Australia and Ireland that target men at risk of social isolation, offer them activities of interest, such repairing vintage bicycles and classes on

information and technology (e.g. Men's Sheds) (see: WHO, 2015). Similar strategies tailored to the Ugandan context, particularly addressing men's lack of social connection, could go a long way to enhance health and wellbeing.

Equally, both in person and technology assisted interventions can be an effective means of promoting social interaction, especially for those who are immobile (WHO, 2015). For instance, Portugal implemented a free telephone pilot program, that connects four older adults each day with a volunteer moderator from the community to discuss a variety of topics (e.g. current events, culture, health, sport). Through this intervention, older adults acquire a reliable source of companionship and mental stimulation. Considering the majority of seniors in Uganda have a mobile phone, implementing a similar strategy would provide a fruitful opportunity to enhance health and wellbeing outcomes (AIP, 2015).

6.4.2 Strengthening Economic Opportunities

The importance of economic security for health and wellbeing in old age is underscored in the results from Chapters 3, 4, and 5. From the models in Chapter 3, there is evidence that a lack of finances (e.g. assets, lack of employment, low financial status), has a negative indirect influence on subjective wellbeing, which was corroborated in Chapter 4, and 5. Chapter 3 highlights however, that while a lower financial status is associated with a lower subjective wellbeing for both women and men, finances more strongly and positively mediate the age-SWB relationship for older men, suggesting a lack of financial security has a greater impact on older women's subjective wellbeing. The results from Chapter 5 tell a similar story, such that men's lack of economic security and available financial opportunities undermine health and wellbeing. The results from Chapter 5 also underscore the precarious situation older women experience in old age, due to their lack of financial security and dependency on patrilineal family systems. These findings were further corroborated in Chapter 4, revealing how a lack of economic security,

financial opportunities, and pension systems limit opportunities to secure basic life necessities, exacerbate pre-existing health issues, and undermine self worth.

Together, the findings point to the need to strengthen economic security through a number of interconnected fronts. First, considering only 2% of Uganda's 1.3 million seniors are covered by any form of pension protection (most of whom are government employees), the national government should take steps to implement a national universal social security system. While the government has implemented a pilot non-contributory social pension scheme, it only covers 47 of the countries' 127 districts (Stewart, 2014). Considering pensions systems reduce the risk of falling into poverty in old age, allow smooth consumption patterns into later life, and ensure the elderly have at least enough to meet their basic needs (Stewart, 2014), the Ugandan government should take concrete steps to implement a universal pension scheme. This would reduce old age poverty, provide the ability to diversify livelihoods, afford some financial independence and indirectly benefit children living in skipped generation households (Adato & Bassett, 2009).

It is important to mention that while the results from Chapter 5 suggest social support systems may mitigate some of the consequences associated with limited finances for women, the risks of poverty for elderly women are even graver (UBOS, 2017; Stewart, 2014), especially when they become widows and are stripped of their property (as indicated in Chapter 5). Thus, ensuring financial mechanisms are in place to cater to the specific financial needs of older women and men is needed to ensure healthy aging. Moreover, eliminating mandatory retirement ages, as recommended by the OECD, would benefit older workers, employers and economies, allowing older adults, if they so choose, the freedom to remain active participants in society (EU, 2000). To this end, strategies to combat age discrimination in employment, possibly through introducing laws that make age discrimination illegal, increasing opportunities for

intergenerational teams, and introducing campaigns to challenge the myths and inaccurate stereotypes that hinder older people's ability to participate, would go a long way to reduce negative attitudes and stereotypes the elderly endure (Wacker et al., 2011; Allan et al., 2008).

6.4.3 Fostering Enabling Environments

Results from Chapters 3, 4, and 5 point to critical sociocultural and physical (i.e. built and natural) barriers preventing healthy aging, centered around 4 key areas: societal ageism, ill-equipped health systems, gender norms, and natural and built environmental conditions. Results from Chapter 4 reveal ageism – the stereotyping, prejudice, and discrimination against people on the basis of their age – is embedded in institutional governmental bodies, global health organizations, health systems, and interpersonal social interactions. Results from Chapters 3 and 5, albeit indirectly, reveal how ageism informs funding (or lack thereof) and populations of government policy focus. Since ageism, when internalized, is associated with poorer functional health, slower disease recovery and shorter life spans (Levy 2009; Levy, et al., 2006), tackling ageism requires building a new understanding of aging; one that does not conceptualize older people as burdens or a waste of life. Rather, it demands an acceptance of the wide diversity of experiences in older age, an acknowledgement of the inequalities behind it, and an openness to change (see: WHO, 2015). To this end, communication campaigns that increase knowledge about and understanding of aging in different venues (e.g. television, radio, newspaper) and to diverse societal groups (e.g. general public, policymakers, employment, service providers), would help promote a more balanced message about aging.

Second, while increased age is associated with an increased need for health care (WHO, 2015), evidence from chapter 4 indicates a disconnect between health care need and healthcare utilization, due to barriers to access (i.e. economic, geographic, social, etc.), a lack of age appropriate services and a

deficient prioritization towards elderly medication. Given this, strategies that address issues of access (e.g. geographic, financial, sociocultural, etc.), through the provision of home-based care, community health visitations, and the provision of travel stipends would begin providing more coordinated care. Initiatives that provide basic training about geriatric and gerontological issues during pre-service training and in continuing professional development courses for health professionals, including core geriatric and gerontological competencies in all health curricula, updating existing medicine purchasing guidelines, and encouraging the development of geriatric units for the management of complex cases is desperately needed (WHO, 2013).

Results from Chapters 3 and 5 reveal gender barriers restrict opportunities for healthy aging. Findings from Chapter 3 reveal that being a woman in Uganda's Central region has a direct negative influence on wellbeing. These findings were further corroborated in Chapter 5 which revealed due to gender norms related to inheritance, land ownership and marital rights, women not only become homeless and destitute, they also have less financial fortitude in their later lives, due to their lack of education and economic opportunities in their earlier lives (UBOS, 2017). Gender based violence was also found to seriously undermine their personal agency and wellbeing. Findings from Chapter 5 further underscore particular issues related to older men—social isolation, loneliness, problematic coping—that also need attention. To this end, there is the need for gender sensitive policy approaches that take into consideration the particular contexts of older women and men, their current and life long interactions, as well as the social norms, financial protection and barriers each face (WHO, 2016). Establishing links between the elderly—particularly older women— and available mechanisms to enforce legal rights, uphold justice, and

ensure protection and security from multiple forms of abuse, perhaps through the provision of paralegal services, is urgently needed to guarantee the safety and wellbeing of the elderly (see: Nyanzi, 20009).

Enabling one to age in the right place—most often the home or community— safely and comfortably, is a key priority of the GSAP, and enhances health and wellbeing in old age (Cutchin, 2003; Joosten, 2007). Despite these benefits, results from Chapter 4 reveal critical environmental barriers—climatic conditions, food, water, sanitation, and housing infrastructure— preventing the ability to age with health in place. Considering a human rights-base approach to health states that the right to health "extends to the underlying determinants of health, such as a food, nutrition, housing, access to safe and potable water and adequate sanitation" (UN, 2000, pg. 3), the Ugandan government and associated ministries should guarantee all older persons have access to appropriate food and nutritional support—perhaps through supplementary feeding sides—include the elderly—specifically those with disabilities— in the acquisition of safe and appropriate water and sanitation, and develop a comprehensive housing modification package to enhance safety and psychosocial wellbeing (Lansley et al., 2004). For example, the government should consider providing water barrels, age appropriate latrines and ensure that help is available in the community, especially for older people who have difficulty accessing water pumps, toilets, or carrying water supplies for cooking. Equally, the government should facilitate access to livelihood programs as well as take concrete steps to retrofit inadequate housing structures to not only mitigate against deleterious diseases and health problems but also enhance safety and personal security (PAHO, 2012; WHO, 2013).

6.4.4 Addressing Determinants Across the Life Course via Health in All Policies

Results from Chapters 3, 4, and 5 provide evidence of how different inequalities accumulate over the life course— due to the exposure of multiple health, environmental, social risks and/or barriers — and how they affect health and wellbeing in old age (see: Grundy et al., 2013). Chapter 3 indicates how educational and economic opportunities, or lack thereof, impact wellbeing in old age, Chapter 4 underscores how economic precarity and the inability to save financially inform realities in old age, whereas Chapter 5 highlights how gender roles, responsibilities and identities interact along the life course to inform wellbeing realities in old age. Since determinants of health in older ages are being established in early life, public health policy should be framed to maximize the number of people who experience positive trajectories of aging and serve to break down the many barriers that limit their ongoing social participation and contributions in later life (Nussbaum, 2011). Considering older people have diverse needs — some experience personal growth and health in old age, while others disengage with greater health problems— a comprehensive public health response to population aging, relevant to all older people, is needed.

Given health and wellbeing outcomes in old age are not random, but rather skewed by broader environmental factors that create cumulative advantages/disadvantages over the life course (WHO, 2015), policy responses that overcome, rather than reinforce inequalities in old age and across the life course are fundamentally needed. While a challenging task, embedding healthy aging in all policy sectors (education, culture, environment, labour market, finance, housing, etc.) and at all levels of government (district, municipal, regional, national) would help to level-up social gradients and ensure a coordinated response to healthy aging from cradle to grave (Kuruvilla et al., 2018; WHO, 2017). Institutionalizing the goal of enhancing functional ability is a starting point for collaboration across sectors. That said, each

sector needs to establish clear commitment to goals, lines of responsibility, ensure adequate budgets and specify mechanisms for coordination, monitoring, evaluation and reporting across sectors. Doing so would ensure effectiveness of, and identify gaps in, existing policies, systems and services for healthy aging and reduce health inequalities across the life course (WHO, 2015).

6.4.5 (Integrated) Knowledge Translation for Action on Healthy Aging

Given the clear policy disconnects between the Uganda's Older Person's Policy and the realities of the elderly in the Central region, identified in all substantive chapters, strategies to ensure the policy is successfully translated into action are critical. To begin addressing this issue, initiatives that bring together various stakeholders (e.g. government, health providers, NGOs) at the national, regional, municipal, and district levels, as well as the knowledge holders themselves (i.e. the elderly) are needed to identify policy deficiencies, institutional barriers and particular needs of the elderly. Employing (integrated) knowledge translation approaches, that involve knowledge holders (e.g. elderly) as equal partners alongside other stakeholders would lead to information that is more relevant and useful for stakeholders, and thus increase the likelihood of effective policy implementation (Cargo & Mercer, 2008; Bowen & Martens, 2006). Collaborative partnerships, while difficult to form, would provide a platform for the transfer of information among different groups, joint interpretation of information, and establishing shared information systems that ultimately improve the likelihood that the Older Persons Policy is translated into actionable outcomes across all levels (Ellen et al., 2017).

6.5. Limitations and Future Research Directions

Despite the many contributions of this thesis, this research has limitations, and thus presents many future research opportunities. First, while Chapter 3 aimed to investigate a range of determinants of SWB, self report information were used to ascertain subjective wellbeing scores which have been

critiqued for eliciting socially desirable responses, and information that largely reflects an individuals' perceptions of their behavioural intentions or false beliefs and attitudes, rather than their actual behaviour (Rathje, 1989; Tarrant & Cordell, 1997). Future research that uses a community-based wellbeing measure that is grounded in what matters to people and is multi-dimensional in nature (see: Kangmennaang & Elliott, 2019) would provide a more comprehensive understanding of what accounts for senior's wellbeing. This would also help to build partnerships that are vital to ensuring maximum levels of wellbeing across the life course and in old age (Atkinson 2011: 2013; Schwanen and Atkinson 2015). Equally, since these data were drawn from a cross sectional design, potential changes in subjective wellbeing and its determinants over time are unable to be considered. Considering factors in earlier life are found to both positively and negatively influence subjective wellbeing in later life (Vanhoutte & Nazroo, 2016), longitudinal studies that identify when and characterize how various factors (socioeconomic, behavioural, biological, etc.) influence SWB over time, would not only present opportunities to (potentially) modify certain factors that influence SWB, it would also help in the pursuit of healthy aging (see: Stanziano et al., 2010).

Equally, while chapter 3 used secondary data comprising five categories of seniors [i.e. (1) have an adult child who died of HIV/AIDS; (2) have an adult child who is living with HIV and on antiretroviral therapy (ART); (3) have no child with HIV/AIDS and are not infected with HIV; (4) is HIV infected and on ART for at least one year; (5) is HIV infected and not on ARTs], the chapter sought to examine determinants of subjective wellbeing among seniors as a whole, and explore variations by gender. While it was possible to explore how determinants influenced the subjective wellbeing of seniors in each of these five categories, a signifigant literature already exists around these issues (see: Mugisha, Schatz, Seeley, Kowal, 2015; Nyirenda, Newell, Mugisha et al., 2013; Mugisha, Scholten, Owilla et al.,

2013; Scholten, Mugisha, Seeley, 2011), and fragmenting the total sample size into smaller groups would have effected the robustness of the data. What did emerge from the qualitative findings is that HIV does effect senior's health and wellbeing through their additional childcare responsibilities and associated costs of child rearing (i.e. provision of school fees, withholding personal food for children, increased psychosocial stress, etc.). Moreover, the qualitative research found that some seniors also live with HIV. While the numbers of seniors who disclosed this information was small (see: Table 2.3.4.4 and Table 2.3.4.5) and discussion around this topic sparse, it is plausible that due to stigma associated with aging with HIV in Uganda and the lack of public attention given to aging with HIV/AIDS in this context more seniors may also have been HIV positive (see: Kuteesa, Wright, Seeley, et al., 2014; Richards, Zawango, Seeley et al., 2013; Wright, Zalwango, Seeley et al., 2012; Bantebya, Ochen, Pereznieto, 2014). Current data suggests HIV prevalence among older adults in Uganda is 5.7% for those 55 years and above (7.2% for the general) (Uganda Ministry of Health, ICF International, Centers for Disease Control and Prevention, USAID & WHO Uganda, 2012). Considering older adults are an at-risk group to HIV due to issues of wife inheritance, trans-generational and transactional sex, and polygamy, yet receive negligible attention in ARV provision and disease management (see: Nyanzi, Emodu-Walakira, Serwaniko, 2009; 2011; Richards, Zalwango, Seeley et al., 2013; Bantebya, Ochen, Pereznieto, 2014) underscores an important area for future research consideration. As others suggest (see: Richards Zalwango, Seeley et al., 2013; Aboderin, 2014; Negin, Geddes, Brennan-Ing, et al., 2016) more attention should be directed towards interrogating the drivers of HIV among older individuals, as well as promote safe sexual health in old age in order to support positive health and wellbeing outcomes.

Drawing on the complementary role of both quantitative and qualitative data sources in this thesis not only enhanced insight into the patterns and potential associations between aging, health and

wellbeing, it also provided the opportunity to explain certain processes contributing to these outcomes (Warshawsky, 2014). Although both quantitative and qualitative data sources were acquired from the Central Region of Uganda, they are however from different districts, and thus unable to draw complete connections between participant characteristics in the quantitative sample with those in the qualitative sample. Yet, given the similar demographic composition of participants in both the quantitative (see: Scholtan, Seely, Mugisha et al., 2011) and qualitative sample, as well as the similarities in demographic, socioeconomic, cultural and geographical characteristics between these districts, I anticipate that these data sources are comparable and able to tell a comprehensive story. That said however, more mixed method research in similar districts in Uganda would enhance explanations of elderly health and wellbeing.

This research underscores the importance of place in the aging experience and uncovers several related areas for future research. First, despite the fact that the world's population is urbanizing (Hasse, Guneralp, Dahiya et al., 2018), a signifigant number of people in LMICs, old and young, still reside in rural areas (Thurlow, Dorosh, Davis, 2019). Considering 84% of Uganda's population continues to reside in rural locations (UBOS, 2016), the findings from this research are of continued importance. Nevertheless, the results are unable to speak to the urban aging experience. The fact that 68% of the world's population is projected to live in urban areas by 2050 (compared to 55% in 2018), with close to 90% of this growth occurring in Africa and Asia (UN, 2018), generates fodder for future research consideration. Given the paucity of literature surrounding aging in urban environments, particularly in SSA (see: Leeson, 2018), more research is needed to explore the differences and potential similarities between aging in rural and urban environments in order to elucidate the importance of place-based dynamics in the aging experience, and generate evidence to inform comprehensive policies to meet the

needs of seniors in both rural and urban environments. Second, the findings from Chapter 2 surrounding family abandonment and land grabbing among seniors are consistent with other work in Uganda as well as Kenya (see: Joireman, 2018; Evans, 2015; Muga, Onyango-Ouma, 2009; Seeley, Kajura, Bachengana et al., 1993), but sit in contrast to those from Ghana and Nigeria (see: Okoye, 2012; McGadney-Douglass, Douglass, 2008; Adaye, Aborampah, 2004; Aboderin, 2004) in the West African context.

These differences highlight the importance of recognizing Africa as a continent comprised of unique histories, cultures and geographies, underscoring the fact that as geographers, we must attend to not only space but place in order to appreciate the nuances of aging. While these results illustrate the problems associated with generalizing findings from place to place, they do however suggest the possibility that some findings are transferable to geographical locations of similar epidemiologic, demographic and topographic characteristics. In this regard, more multi-site studies that tease out the gradations surrounding family abandonment and land grabbing, along with many other place-based dynamics (i.e. particular histories, economies, ecologies, gender dynamics, family systems, etc.) would go a long way in enhancing our knowledge surrounding the needs, challenges and issues seniors experience across the African continent while increasing the likelihood that findings and potential solutions for challenges associated with aging are transferable (Baxter & Eyles, 1997; LeCompte & Goetz, 1982).

Another important area for consideration emerged from this research. While recognition was given to the multiple hierarchies of difference within which older women and men are located (i.e. ethnic, sexual, class based, etc.), this research only explored differences between two categories of differences, such as the relations between old and young, and those between gender and age. While examining these intersectionalities was invaluable in this research, more consideration should be given to the ways other hierarchies of difference intersect with age and gender (see: King, Almack, Jones, 2019). Doing so would

enhance explanations of inequalities in old age, enrich knowledge surrounding reasons for these variations and improve the responses to them (see: Calasanti & Giles, 2018).

Even though this work uncovers potential psychosocial (e.g. where stereotypes appear to generate expectations that act as self-fulfilling prophecies) and behavioural (e.g. where stereotypes appear in healthy practices) pathways of embodied ageism, this research was unable to explore the physiological (e.g. autonomic nervous system) pathways of embodied ageism (see: Levy & Leifheit-Limson, 2009; Levy, 2009). Considering recurrent exposures to age stereotypes and discrimination in the environment are documented to activate the autonomic nervous system, increase allostatic load in the body and increase the risk of chronic disease, premature mortality, impaired recovery, among many others complications (Levy & Leifheit-Limson, 2009; Levy, Zonderman, Slade, Ferrucci, 2009), more work that brings together interdisciplinary teams is needed to examine the pathways of embodied ageism and its deleterious impacts in old age. Given geographic gerontology's interdisciplinary nature, yet often siloed research agendas and fragmented takes on environment and place (e.g. sociocultural vs. biophysical) (see: Andrews et al., 2007; 2009; Achenbaum, 1995; 1987; Birren 1999; Alkema & Alley, 2006, examining the potential biological mechanisms, along with psychosocial and behavioural pathways of embodied ageism in place (see: Proir et al., 2018) offers a potential unifying theme for the field. This mirrors recent discussions from some geographers in the field who have sought to find a 'middle ground', balancing the social and cultural aspects of the aging body on the one hand and the biological and physiological on the other (see: Schwanen, et al., 2012). While geographers often privilege the social and cultural aspects of aging, I echo Schwanen's (2012, pg. 1292) and Casey's (1998, pg. 208) call for more research in the field that explores the "dense matrix of nature and culture" or in other words, the interlinking sociocultural and biophysical aspects of aging in place. Given the need for alliances between biological/physiological and

the social/cultural aspects of embodied aging as others have highlighted (see: Schwanen et al., 2012: Bengtson & Settersten, 2016), perhaps attending to the embodiment of ageism in all its totality (i.e. psychosocial, behavioural, physiological, etc.) provides a starting point to work through these aforementioned dichotomies. Doing so could provide a way to go beyond simply biologizing the social or socializing the biology, by integrating the disciplines in such a way that fuses them together in surprising, synergistic and transformative outcomes.

Equally, another area of consideration relates to the life course perspective. Drawing on a life course perspective in this research enabled the identification of particular events and potentially critical points in elderly men and women's lives. For instance, Chapter 5 revealed how particular events and points in one's life — menstruation, childbirth, employment opportunities, education — had potential short- and long-term impacts on health and wellbeing over the life course. While this research points to some critical periods, it was unable to pinpoint the exact points across the life course that informed outcomes in old age. Thus, more research identifying critical points across the life course, would allow for the identification of similarities and differences between places, critical moments to intervene, and mitigate the consequences of inequalities in old age (Pearce, 2018; Adam et al., 2012; Sadana et al., 2016). Potential strategic areas for future consideration include the examination of the (i) underlying conditions and circumstances that shape and differentially affect a person's likelihood to age well across the life course, within a population and across countries; (ii) integration across health and social systems (the organization, coverage of services and performances that affect the health of older adults at home, in communities or within institutions; and (iii) the broader environmental context and mechanisms that optimize functional ability (Ostlin et al., 2011; Sadana et al., 2016).

Lastly, findings from all substantive chapters begin filling important knowledge gaps identified by the WHO and highlight the importance of developing comprehensive models of healthy aging—ones that consider the diversity of aging experiences (Chapters 3, 4, 5), along with the spatial (Chapters 3, 4, 5) and temporal (Chapter 5) dimensions of healthy aging. Despite the knowledge gleaned from this thesis, progress on healthy aging will require better understandings of age-related issues and trends. For instance, how are subjective wellbeing ratings in old age changing over time? (Chapter 3), what are the short- and long-term implications of climate variations on health in old age? (Chapter 4), how do age, gender and other identities of difference inform health and wellbeing outcomes and how do they vary by place (Chapter 5)?

While many questions remain unanswered, addressing them in a comprehensive way that involves and allows for the contribution of older people in the research process is fundamentally needed in order to develop more relevant results and innovative responses (WHO, 2016). As findings from this thesis indicate, incorporating knowledge users and knowledge holders in the research process generated relevant information that knowledge users could apply to affect programs, policy modifications and practice (Cacari-Stone et al., 2014). Although this research began addressing calls for iKT approaches for aging and health (see: Ellen, 2017), more attention should be given to the iKT process in the context of aging and health. Further research is needed to determine what works, in what contexts, and under what conditions (Damschroder et al., 2009; Santesso, Tugwell, 2006). Considering the evaluation of (integrated) knowledge translation interventions in general, have primarily stemmed from developed countries, more work needs to examine iKT processes in low-middle-income contexts, along with the fit and relevance of the framework, taking into account cultural, financial, service and human resource availability (Ellen, 2017). Since building relationships, collaboration, skills and resources for

implementation are shaped by the motivations, time, perspectives and priorities of all partners (Kokkonen, Rissanen, & Hujala, 2012; Wald, Leykum, Mattison, Vasilevskis, & Meltzer, 2014), as indicated in this thesis, researching the research process itself, would benefit future scholars, knowledge users and knowledge holders who engage in integrated knowledge translation research for healthy aging. While there are many barriers to realizing this potential, building knowledge on the iKT process itself from a variety of contexts would help researchers and knowledge users identify similarities in the iKT process and the potential transferability of knowledge on healthy aging. Moreover, this would foster insight into the place specific factors and circumstances that may limit or promote iKT processes, ultimately revealing why place matters for healthy aging.

References

Chapter 1

Aboderin, I. (2016). Coming Into Its Own? Developments and Challenges for Research on Aging in Africa. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, gbw017.

Aboderin, A., & Beard, J. (2015). Older people's health in sub-Saharan Africa. *The Lancet*, *385*(9968), e9-e11

Aboderin, I. (2009). Ageing in West Africa. In: Uhlenberg, P. (Ed.). (2009). *International handbook of population ageing* (Vol. 1). Springer Science & Business Media.

Aboderin, I. (2004). Modernisation and ageing theory revisited: Current explanations of recent developing world and historical Western shifts in material family support for older people. *Ageing and society*, *24*(01), 29-50.

Adams, V., Burke, N.J., Whitmarsh, I.,(2013). Slow research: thoughts for a movement in global health. Med. Anthropol.

Andrews, G., Cutchin, M.P., Skinner, M., (2018). Space and place in geographical gerontology: theoretical traditions, formations of hope. In: Skinner, M.W., Andrews, G.J., Cutchin, M.P. (Eds.), (2018). Geographical Gerontology: Perspectives, Concepts, Approaches. Routledge.

Andrews, G. J., Milligan, C., Phillips, D. R., & Skinner, M. W. (2009). Geographical gerontology: mapping a disciplinary intersection. *Geography Compass*, *3*(5), 1641-1659.

Andrews, G. J., & Kearns, R. A. (2005). Everyday health histories and the making of place: the case of an English coastal town. *Social Science & Medicine*, *60*(12), 2697-2713.

Andrews, G. J., Cutchin, M., McCracken, K., Phillips, D. R., & Wiles, J. (2007). Geographical gerontology: The constitution of a discipline. *Social Science & Medicine*, *65*(1), 151-168.

Andrews, G. J., Evans, J., & Wiles, J. L. (2013). Re-spacing and re-placing gerontology: relationality and affect. *Ageing & Society*, *33*(8), 1339-1373.

Andrews, G. J., & Phillips, D. R. (Eds.). (2004). *Ageing and place*. Routledge.

Arokiasamy, P., Uttamacharya, U., Jain, K., Biritwum, R. B., Yawson, A. E., Wu, F., ... & Afshar, S. (2015). The impact of multimorbidity on adult physical and mental health in low-and middle-income countries: what does the study on global ageing and adult health (SAGE) reveal?. *BMC medicine*, 13(1), 178.

Barnes, T.J., (2001). Retheorizing economic geography: from the quantitative revolution to the 'cultural turn'. *Ann. Assoc. Am. Geogr*. 91, 546–565.

Beard, J. R., Officer, A., de Carvalho, I. A., Sadana, R., Pot, A. M., Michel, J. P., ... & Thiyagarajan, J. A. (2016). The World report on ageing and health: a policy framework for healthy ageing. *The Lancet*, *387*(10033), 2145-2154.

Beard, J. R., & Bloom, D. E. (2015). Towards a comprehensive public health response to population ageing. *Lancet (London, England)*, *385*(9968), 658-661.

Bergman Lodin, J., Paulson, S., & Mugenyi, M. S. (2012). New seeds, gender norms and labor dynamics in Hoima District, Uganda. Journal of Eastern African Studies, 6(3), 405-422.

Bowling, A., & Dieppe, P. (2005). What is successful ageing and who should define it?. *Bmj*, *331*(7531), 1548-1551.

Brenner, N., 2001a. The limits to scale? Methodological reflections on scalar structuration. Prog. Hum. Geogr. 25 (4), 591–614.
Brown, T. I. M., & Moon, G. (2012). Geography and global health. *The Geographical Journal*, *178*(1), 13-17.
Buck, D., & Maguire, D. (2015). Inequalities in life expectancy: Changes over time and implications for policy.
Burton-Jeangros, C., Cullati, S., Sacker, A., & Blane, D. (Eds.). (2015). A life course perspective on health trajectories and transitions (Vol. 4). Springer.
Calasanti, T., & Giles, S. (2018). The challenge of intersectionality. *Generations*, *41*(4), 69-74.
Calasanti, T. M., & Slevin, K. F. (2013). Age matters: Re-aligning feminist thinking. Routledge.
Calasanti, T. (2003). Theorizing age relations. *The need for theory: Critical approaches to social gerontology*, 199-218.
Cesari, M., Araujo de Carvalho, I., Amuthavalli Thiyagarajan, J., Cooper, C., Martin, F. C., Reginster, J. Y., ... & Beard, J. R. (2018). Evidence for the domains supporting the construct of intrinsic capacity. The Journals of Gerontology: Series A, 73(12), 1653-1660.
Conradson, D. (2005). Landscape, care and the relational self: therapeutic encounters in rural England. *Health & place*, *11*(4), 337-348.
Cummins, S., Macintyre, S., Davidson, S. and Ellaway, A. (2005). Measuring neighbourhood social and material context: generation and interpretation of ecological data from routine and nonroutine sources. *Health and Place* 11, 249–60.
Curtis, S. & Jones, I.R. (1998). Is there a place for geography in the analysis of health inequality? *Sociology of Health and Illness 28*, 645–72.
Cutchin, M.P., (2013). The art and science of occupation: nature, inquiry, and the aesthetics of living. J. *Occup. Sci. 20* (4), 286–297.
Cutchin, M. P. (2009). Geographical gerontology: new contributions and spaces for development.
Cutchin, M.P., (2003). The process of mediated aging-in-place: a theoretically and empirically based model. *Soc. Sci. Med. 57* (6), 1077–1090.
Deaton, A. S., & Tortora, R. (2015). People in Sub-Saharan Africa rate their health and health care among the lowest in the world. *Health Affairs*, *34*(3), 519-527.
Diener, E. (2009). *Well-being for public policy*. Oxford University Press, USA.
Elmhirst, R. (2015). Feminist political ecology. In The Routledge handbook of gender and development (pp. 82-90). Routledge.
Elder, Glen H.; Monica Kirkpatrick Johnson and Robert Crosnoe: The Emergence and Development of Life Course Theory.In: Jeylan T. Mortimer and Michael J. Shanahan (ed.). Handbook of the Life Course. Springer, 2003, pp. 3–19.
Evans RG, Stoddart GL. (2003). Consuming research, producing policy? *American Journal of Public Health;93*(3):371-379.
Ferreira, M. (2005). Elder abuse in Africa: What policy and legal provisions are there to address the violence?. *Journal of Elder Abuse & Neglect*, *16*(2), 17-32.
Finlay, J., Franke, T., McKay, H., & Sims-Gould, J. (2015). Therapeutic landscapes and wellbeing in later life: Impacts of blue and green spaces for older adults. *Health & Place*, *34*, 97-106.
Gatrell, A. C., & Elliott, S. J. (2014). *Geographies of health: An introduction*. John Wiley & Sons.
Giddens, A., (1984). The Constitution of Society.

Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.
Goldberg M, Melchior M, Leclerc A, Lert F. (2003). Épidémiologie et déterminants sociaux des inégalités de santé. *Revue d'épidémiologie et de santé publique;51*:381-401.
Harper, S. (2015). The Challenges of Twenty-First-Century Demography. In *Challenges of Aging* (pp. 17-29). Palgrave Macmillan UK.
Hery, A. (2016). Uganda Poverty Assessment Report. The Work Bank.
Hickey, S., & Bukenya, B. (2016). The politics of promoting social cash transfers in Uganda.
Hillcoat-Nallétamby, S., & Ogg, J. (2014). Moving beyond 'ageing in place': older people's dislikes about their home and neighbourhood environments as a motive for wishing to move. *Ageing & Society*, *34*(10), 1771-1796.
Ibrahim, F., & Namuddu, J. (2014). Uganda's Senior Citizens Grant: Direct and Spill-over Effects of Cash Transfers in Kiboga and Kyenjojo Districts. Ministry of Gender, Labour and Social Development.
Jie, Y. U., ROSENBERG, M. W., & CHENG, Y. (2015). Aging at home and the intent to relocate in Beijing. *Progress in Geography*, *3*.
Kasente, D., Asingwire, N., Banugire, F., & Kyomuhenda, S. (2002). Social security systems in Uganda. *Journal of Social Development in Africa*, *17*(2), 159-180.
Kearns, R., & Collins, D. (2010). Health geography. *A companion to health and medical geography*, 15-32.
Kearns, R., & Moon, G. (2002). From medical to health geography: novelty, place and theory after a decade of change. *Progress in Human Geography*, *26*(5), 605-625.
Kerschner, H., & Pegues, J. A. M. (1998). Productive aging: A quality of life agenda. *Journal of the American Dietetic Association*, *98*(12), 1445-1448.
King, B. (2017). States of disease: Political environments and human health. Univ of California Press.
King, B., & Crews, K. A. (Eds.). (2013). *Ecologies and politics of health*. Routledge
Krekula, C., Nikander, P., & Wilińska, M. (2018). Multiple marginalizations based on age: gendered ageism and beyond. In Contemporary perspectives on ageism (pp. 33-50). Springer, Cham.
Krieger N. (2001). Theories for social epidemiology in the 21st century: an ecosocial perspective. International Journal of Epidemiology;30(4):668-677.
Lawton, M. P., & Nahemow, L. (1973). Ecology and the aging process. In C. Eisdorfer & M. P. Lawton (Eds.), Psychology of adult development and aging (pp. 619–673). Washington, DC: American Psychological Association.
Lloyd-Sherlock, P. G., Ebrahim, S., McKee, M., & Prince, M. J. (2016). Institutional ageism in global health policy. *BMJ (Clinical research ed)*, *354*, i4514.
Lloyd-Sherlock, P., Beard, J., Minicuci, N., Ebrahim, S., & Chatterji, S. (2014). Hypertension among older adults in low-and middle-income countries: prevalence, awareness and control. International journal of epidemiology, 43(1), 116-128.
Lloyd-Sherlock, P., Penhale, B., & Ayiga, N. (2018). Financial abuse of older people in low and middle-income countries: the case of South Africa. Journal of elder abuse & neglect, 30(3), 236-246.
Low G, Molzahn AE, Schopflocher D (2013). Attitudes to ageing mediate the relationship between older peoples' subjective health and quality of life in 20 countries. Health Qual Life Outcomes; 11: 146
Malpas, J., (2012). Putting space in place: philosophical topography and relational geography. Environ. Plann. Soc. Space 30 (2), 226–242.

Marmot, M. (2018). Inclusion health: addressing the causes of the causes. *The Lancet, 391*(10117), 186-188.
Massey, D. (1999b). Space-time, 'science' and the relationship between physical geography and human geography. *Transactions of the Institute of British Geographers*, *24*(3), 261-276.
Macintyre, S., Ellaway, A., and Cummins, S. (2002). Place effects on health: how can we conceptualize, operationalize and measure them? *Social Science and Medicine*, *55*, 125 139.
McMullin, J. A. (2009). Understanding social inequality: Intersections of class, age, gender, ethnicity, and race in Canada. Don Mills, ON: Oxford University Press.
Means, R. (2007). Safe as houses? Ageing in place and vulnerable older people in the UK. Soc. Policy Adm. 41 (1), 65e85.
Merttens, F., Sindou, E., Lipcan, A., Pellerano, L., Binci, M., Ssewanyana, S., ... & Garbarino, S. (2016). Evaluation of the Uganda Social Assistance Grants for Empowerment (SAGE) Programme–Impact after Two Years of Programme Operations 2012-2014: Final Report. London: Oxford Policy Management.
Milligan, C., Bingley, A., & Gatrell, A. (2005). Digging deep: Using diary techniques to explore the place of health and well-being amongst older people. *Social science & medicine*, *61*(9), 1882-1892.
MoGLSD (2012). *National Plan of action for older persons 2012/13-2016/17*. Republic of Uganda: Ministry of Gender, Labour and Social Development.
Nading, A.M. (2014). Mosquito Trails: Ecology, Health, and the Politics Of Entanglement. Univ of California Press.
National Planning Authority (NPA). (2014). Report: Harnessing the Demographic Dividend.
Nalwanga, R., & Lund, R. (2018). Examining the impacts of grants on senior citizen beneficiaries in Kiboga District, Uganda. Development in Practice, 28(6), 775-784.
Nayar, K. R., & Kapoor, S. S. (2009). Commission on Social Determinants in Health: A piece meal move?. Indian Journal of Medical Research, 129(2), 117-120.
Neely, A.H., (2015). Internal Ecologies and the limits of local Biologies: a Political ecology of tuberculosis and the body in South Africa. Ann. Am. Assoc. Geogr. 105 (4), 791–805.
Nyakundi, D. B. (2009). A Description of the Pension System in Uganda: Need for Reform. Social Science Research network, posted on, 20.
Otiso, K. M. (2006). Culture and customs of uganda. (pp. 81-98). Greenwood Press.
Pain, R., Mowl, G., Talbot, C., (2000). Difference and the negotiation of 'old age'. Environ. Plann. Soc. Space 18 (3), 377–393.
Petersson, I., Lilja, M., Hammel, J., & Kottorp, A. (2008). Impact of home modification services on ability in everyday life for people ageing with disabilities. *Journal of Rehabilitation Medicine*, *40*(4), 253-260.
Raphael, D. (2006). Social determinants of health: present status, unanswered questions, and future directions. International Journal of Health Services, 36(4), 651-677.
Rocheleau, D., Thomas-Slayter, B., & Wangari, E. (1996). Gender and environment. Feminist political ecology: Global issues and local experiences, 4-5.
Rishworth, A., & Elliott, S. J. (2018). 9 Ageing in low-and middle-income countries. *Geographical Gerontology: Perspectives, Concepts, Approaches*.
Rishworth, A., & Elliott, S. J. (2019). Global environmental change in an aging world: The role of space, place and scale. *Social Science & Medicine*, *227*, 128-136.Rowles, G. D. (1978). *Prisoners of space?: Exploring the geographical experience of older people*. Westview Press.

Rowe, J. W., & Kahn, R. L. (1997). Successful aging. *The gerontologist*, *37*(4), 433-440.
Sadana, R., Blas, E., Budhwani, S., et al. (2016) Healthy ageing: raising awareness of inequalities, determinants, and what could be done to improve healthy equity. *Gerontologist 58*: S17893.
Sarvimäki, A., & Stenbock-Hult, B. (2000). Quality of life in old age described as a sense of well-being, meaning and value. *Journal of advanced nursing*, *32*(4), 1025-1033.
Sayre, N.F., (2005). Ecological and geographical scale: parallels and potential for integration. *Prog. Hum. Geogr. 29* (3), 276–290.
Sayre, N.F., (2009). Scale. In: Castree, Noel, Demeritt, David, Rhoads, Bruce, Liverman, Diana (Eds.), A Companion to Environmental Geography. Blackwell Publishing, pp. 95–108.
Schatz, E., Seeley, J., Negin, J., Weiss, H. A., Tumwekwase, G., Kabunga, E., ... & Mugisha, J. (2019). "For us here, we remind ourselves": strategies and barriers to ART access and adherence among older Ugandans. *BMC public health*, *19*(1), 131.
Scharf, T., Phillipson, C., Smith, A., 2005. Social exclusion of older people in deprived urban communities of England. Eur. J. Ageing 2 (2), 76e87.
Schatz, E., Seeley, J., Negin, J., & Mugisha, J. (2018). They 'don't cure old age': older Ugandans' delays to health-care access. Ageing & Society, 38(11), 2197-2217.
Schwanen, T., Hardill, I., Lucas, S., (2012). Spatialities of aging: the co-construction and coevolution of old age and space. *Geoforum 43* (6), 1291–1295.
Scharf, T., Phillipson, C., Smith, A. (2005). Social exclusion of older people in deprived urban communities of England. Eur. J. *Ageing 2* (2), 76e87.
Siriwardhana, D. D., Hardoon, S., Rait, G., Weerasinghe, M. C., & Walters, K. R. (2018). Prevalence of frailty and prefrailty among community-dwelling older adults in low-income and middle-income countries: a systematic review and meta-analysis. *BMJ open*, *8*(3), e018195.
Skinner, M., Andrews, G., Cutchin, M.P., (2018). Introducing geographical gerontology. In: Skinner, M.W., Andrews, G.J., Cutchin, M.P. (Eds.), (2018). Geographical Gerontology: Perspectives, Concepts, Approaches. Routledge.
Skinner, M. W., Cloutier, D., & Andrews, G. J. (2015). Geographies of ageing: Progress and possibilities after two decades of change. *Progress in Human Geography*, *39*(6), 776-799.
Skinner, M. W., & Joseph, A. E. (2007). The evolving role of voluntarism in ageing rural communities. *New Zealand Geographer*, *63*(2), 119-129.
Smyth, F. (2008). Medical geography: understanding health inequalities. *Progress in Human Geography*, *32*(1), 119-127.
Smith, N., (1993). Homeless/global: scaling places. In: Bird, J., Curtis, B., Putnam, T., Robertson, G., Tickner, L. (Eds.), Mapping the Futures: Local Cultures, Global Change. Routledge, London, pp. 87–119.
Steptoe, A., Deaton, A., & Stone, A. (2015). Subjective wellbeing, health, and ageing. *The Lancet*, *385*(9968), 640-648.
Suzman, R., Beard, J. R., Boerma, T., & Chatterji, S. (2015). Health in an ageing world—what do we know? *The Lancet*, *385*(9967), 484-486.
Uganda Bureau of Statistics (UBOS) (2013). Uganda Facts and Figures on Gender. Kampala Uganda.
United Nations, Department of Economic and Social Affairs, Population Division (UNDESA) (2015). World Population Prospects: The 2015 Revision, Key Findings and Advance Tables. Working Paper No. ESA/P/WP.241.

Wahl, H. W., Iwarsson, S., & Oswald, F. (2012). Aging well and the environment: Toward an integrative model and research agenda for the future. *The Gerontologist*, *52*(3), 306-316.
Walker, R. B., & Hiller, J. E. (2007). Places and health: A qualitative study to explore how older women living alone perceive the social and physical dimensions of their neighbourhoods. *Social Science & Medicine*, *65*(6), 1154-1165.
Wiles, J. L., Allen, R. E., Palmer, A. J., Hayman, K. J., Keeling, S., & Kerse, N. (2009). Older people and their social spaces: A study of well-being and attachment to place in Aotearoa New Zealand. *Social Science & Medicine*, *68*(4), 664-671.
Wiles J. 2005. Conceptualizing place in the care of older people: the contributions of geographical gerontology. *International Journal of Older People Nursing 14*(8): 100– 108
Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. (2012). The meaning of "aging in place" to older people. *The gerontologist*, *52*(3), 357-366.
Wilson, K., (2003). Therapeutic landscapes and First Nations peoples: an exploration of culture, health and place. Health Place 9, 83–93.
WHO. (2016). Multisectoral action for a life course approach to healthy ageing: draft global strategy and plan of action on ageing and health. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_17-en.pdf?ua=1
WHO. (2015). *World Report on Ageing and Health.* Geneva: WHO. Available from: http://www.who.int/ageing/publications/world-report-2015/en/
World Health Organization (2002). Active Ageing A Policy Framework. https://apps.who.int/iris/bitstream/handle/10665/67215/WHO_NMH_NPH_02.8.pdf;jsessionid=45B84605D6F30D3B7F05DACF2C08441D?sequence=1

Chapter 2

Aboderin, I. A., & Beard, J. R. (2015). Older people's health in sub-Saharan Africa. *The Lancet*, *385*(9968), e9-e11.
Aboud, F. E., & Singla, D. R. (2012). Challenges to changing health behaviours in developing countries: a critical overview. *Social science & medicine*, *75*(4), 589-594.
Archer, M. (2015). The Relational Subject. Cambridge: Cambridge University Press.
Baxter, J., & Eyles, J. (1997). Evaluating qualitative research in social geography: Establishing 'rigour' in interview analysis. *Transactions of the Institute of British Geographers*, *22*(4), 505-525.
Bergin M., Wells J.S.G. & Owen S. (2008) Critical realism: a philosophical framework for the study of gender and mental health. *Nursing Philosophy*, *9*(3), 169–179.
Bhaskar, R. (1975). A Realist Theory of Science. London: Verso.
Bhaskar R. (1989) The Possibility of Naturalism, 2nd edn. Harvester, Brighton.
Bhaskar R. & Hartwig M. (2010) The Formation of Critical Realism. Routledge, Abingdon, Oxon.
Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3, 77-101.
Brown, K. M., Elliott, S. J., Leatherdale, S. T., & Robertson-Wilson, J. (2015). Searching for rigour in the reporting of mixed methods population health research: A methodological review. Health Education Research, doi:10.1093/her/cyv046

Bryman, A. E. (2003). Member validation Encyclopaedia of social science research methods. Sage.
Cacari-Stone, L., Wallerstein, N., Garcia, A. P., & Minkler, M. (2014). The promise of community-based participatory research for health equity: a conceptual model for bridging evidence with policy. American journal of public health, 104(9), 1615-1623.
Canadian Coalition for Global Health Research. (2015). CCGHR principles for global health research. Canadian Coalition for Global Health Research.
Castleden, H., Sloan Morgan, V., & Lamb, C. (2012). "I Spent the First Year Drinking Tea": Exploring Canadian University Researchers' Perspectives on 150 Community-Based Participatory Research Involving Indigenous Peoples. The Canadian Geographer / Le Géographe canadien, 56(2), 160-179.
Chávez, V., Duran, B., Baker, Q. E., Avila, M. M., & Wallerstein, N. (2008). The dance of race and privilege in CBPR. Community-based participatory research for health: From process to outcomes, 91-105.
Chen, S., Poland, B., & Skinner, H. A. (2007). Youth voices: Evaluation of participatory action research. The Canadian Journal of Program Evaluation, 22(1), 125.
Corbin, J., & Strauss, A. (2008). Chapter 4 | Strategies for Qualitative Data Analysis. In J. Corbin, & A. Strauss (Eds.), Basics of qualitative research: Techniques and procedures for developing grounded theory (3rd ed., pp. 65-86). Los Angeles, CA: Sage Publications.
Crabtree, B. F., & Miller, W. L. (1999). Doing qualitative research (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
Creswell, J. W., & Plano Clark, V. L. (2011). Designing and conducting mixed methods research (2nd ed.). Thousand Oaks, CA: SAGE Publications, Inc.
Creswell, J. W. (2007). Five qualitative approaches to inquiry. Qualitative inquiry and research design: Choosing among five approaches, 2, 53-80.
Crotty, M. 1998. The foundations of social research: meaning and perspectives in the research process. Sage, London.
Cruz MR (2008) What if I just cite Graciela? Working toward decolonizing knowledge through a critical ethnography. Qualitative Inquiry 14(4): 651–658.
Curry, L., & Nunez-Smith, M. (2015). Mixed methods in health sciences research: A practical primer. Thousand Oaks, CA: Sage Publications, Inc.
D'Alonzo, Karen Therese. "Getting started in CBPR: lessons in building community partnerships for new researchers." Nursing inquiry 17, no. 4 (2010): 282-288.
Dear, M. (1978). Planning for mental health care: a reconsideration of public facility location theory. International regional science review, 3(2), 93-111.
Ellen, M. E., Panisset, U., de Carvalho, I. A., Goodwin, J., & Beard, J. (2017). A knowledge translation framework on ageing and health. *Health Policy, 121*(3), 282-291.
Elliott, S. J. (1999). And the question shall determine the method. The Professional Geographer, 51(2), 240-243.
Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs - Principles and practices. *Health Services Research, 48*(6,II), 2134-2156.
Gatrell, A. C., & Elliott, S. J. (2014). *Geographies of health: An introduction*. John Wiley &Sons
Goodman, D. J. (2015). Oppression and privilege: Two sides of the same coin. *J. Interc. Commun, 18*, 1-14.

Glaser, B. and A. Strauss. (1967). The Discovery of Grounded Theory: Strategies for Qualitative Research. New York: Aldine Publishing Company.
Gibbs, Lisa, Michelle Kealy, Karen Willis, Julie Green, Nicky Welch and Jeanne Daly. (2007). 'What Have Sampling and Data Collection got to do with Good Qualitative Research?' Australian and New Zealand Journal of Public Health 31: 540–4.
Government of Canada. (2014, February, 27). Canadian Institutes of Health Research. More About Knowledge Translation at CIHR. Retrieved from http://www.cihr-irsc.gc. ca/e/39033.html#Definition
Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, & Robinson, N., (2006). Lost in knowledge translation: time for a map? Journal of continuing education in the health professions; 26(1), 13-24
Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. Handbook of qualitative research, 2(163-194), 105.
Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. Feminist studies, 14(3), 575-599.
Harper, L. & Laws, G. (1995) Rethinking the geography of ageing. *Progress in Human Geography 19*: 199–221.
Ivankova, N. V., & Kawamura, Y. (2010). Emerging trends in the utilization of integrated designs in the social, behavioral, and health sciences. In A. Tashakkori, & C. Teddlie (Eds.), SAGE handbook of mixed methods in social & behavioral research (2nd ed., pp. 581). Thousand Oaks, CA: SAGE Publications, Inc.
Jull, J., Giles, A., & Graham, I. D. (2017). Community-based participatory research and integrated knowledge translation: advancing the co-creation of knowledge. Implementation Science, 12(1), 150.
Julnes G., Mark M.M. & Henry G.T. (1998) Review: promoting realism in evaluation: realistic evaluation and the broader context. Evaluation, 4(4), 483–504.
Katz, C. (1994). Playing the field: questions of fieldwork in geography. *Professional Geographer*, 46, 67-72.
Kearns, R. (1993) Place and health: towards a reformed medical geography. *Professional Geographer*, 45(2): 139-147.
Kellogg Health Scholars. Community Track Available at: http://www.kellogghealthscholars.org/about/community.cfm
Kingsley, B. C., & Chapman, S. A. (2013). Questioning the meaningfulness of rigour in community-based research: Navigating a dilemma. International Journal of Qualitative Methods, 12(1), 551-569.
Kowal, P., Chatterji, S., Naidoo, N., Biritwum, R., Fan, W., Lopez Ridaura, R., ... & Snodgrass, J. J. (2012). Data resource profile: the World Health Organization Study on global AGEing and adult health (SAGE). International journal of epidemiology, 41(6), 1639-1649.
Krieger, N. (2011). *Epidemiology and the people's health: theory and context*. Oxford University Press.
Kitzinger, J. (2005). Focus group research: using group dynamics. Qualitative research in health care, 56, 70.
Labovitz, S., & Hagedorn, R. (1971). Introduction to social research. New York: McGraw-Hill.
Levin, K. A. (2006). Study design III: Cross-sectional studies. Evidence-based dentistry, 7(1), 24.
Lincoln YS, Guba EG. (1985). Naturalistic inquiry. California: Sage Publications.
Lipscomb, M. (2008). Mixed methods nursing studies: A critical realist critique. *Nursing Philosophy, 9*, 32-45.

Litva A. & Eyles, J. (1995) Coming out: exposing social theory in medical geography. *Health & Place.* (1)1, 5 – 14.
Luttrell W (2000) 'Good enough' methods for ethnographic research. Harvard Educational Review 70(4): 499–523.
Lytle, L. A., Ward, J., Nader, P. R., Pedersen, S., & Williston, B. J. (2003). Maintenance of a health promotion program in elementary schools: results from the CATCH-ON study key informant interviews. *Health education & behavior*, *30*(4), 503-518.
Mascia-Lees, F. E., Shape, S. P., & Cohen, C. B. (1989). The Postmodernist Turn in Anthropology: Cautions from a Feminist Perspective. *Journal of Women in Culture and Society*, 15(1), 7-33.
McEvoy, P., & Richards, D. (2006). A critical realist rationale for using a combination of quantitative and qualitative methods. *Journal for Research in Nursing*, *11*, 66-78.
Meade, M. S. (1977). Medical geography as human ecology: the dimension of population movement. *Geographical Review*, 379-393.
Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
MoGLSD (2012). *National Plan of action for older persons 2012/13-2016/17*. Republic of Uganda: Ministry of Gender, Labour and Social Development.
Moffatt, S., White, M., Mackintosh, J., & Howel, D. (2006). Using quantitative and qualitative data in health services research - what happens when mixed method findings conflict? *BMC Health Services Research, 6,* 28. doi:1472-6963-6-28
Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. Journal of mixed methods research, 1(1), 48-76.
Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative health research*, *25*(9), 1212-1222.
Morton, P. (2006). Using critical realism to explain strategic information systems planning. Journal of Information Technology Theory and Application (JITTA), 8(1), 3.
Nixon, S. (2017, April) Privilege 101: Power, Privilege and Oppression in the Context of Health Equity. Department of Physical Therapy & International Centre for Disability and Rehabilitation at the University of Toronto, Toronto, ON
O'Cathain, A., Murphy, E., & Nicholl, J. (2008). The quality of mixed methods studies in health services research. Journal of Health Services Research & Policy, 13(2), 92-98. doi:10.1258/jhsrp.2007.007074; 10.1258/jhsrp.2007.007074
Patton, M. Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). Thousand Oaks, CA: SAGE Publications, Inc.
Porpora, Douglas. (2015). Restructuring Sociology, New York: Cambridge University Press.
Pawson R. & Tilley N. (1997) Realistic Evaluation. Sage, London.
Robertson, L., & Hale, B. (2011). Interviewing older people; relationships in qualitative research. *Internet Journal of Allied Health Sciences and Practice*, *9*(3), 10.
Sayer, A. (1992). Problems of explanation and the aims of social science. In A. Sayer (Ed.), Method in social science (pp. 232-257). New York: Routledge.
Sayer, Andrew. (2000). Realism and Social Science. London: SAGE. Seidman, I. (2013) Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences. New York: Teachers College Press.

Spencer N. (1995) The rediscovery of reality. Green Left Weekly 190.
Strauss, A., & Corbin, J. (1998). Basics of qualitative research techniques. Thousand Oaks, CA: Sage publications.
Stickley, T. (2006). Should service user involvement be consigned to history? A critical realist perspective. Journal of Psychiatric and Mental Health Nursing, 13(5), 570-577.
The anti-opression network (2019). Available from: https://theantioppressionnetwork.com/allyship/
Vanhoutte, B., & Nazroo, J. (2016). Life course pathways to later life wellbeing: A comparative study of the role of socio-economic position in England and the US. Journal of population ageing, 9(1-2), 157-177.
Van Eerd D, Newman K, DeForge R, Urquhart R, Cornelissen E, Dainty KN. (2016). Knowledge brokering for healthy aging: a scoping review of potential approaches. Implementation Science;11:140.
Wainwright S.P. (1997) A new paradigm for nursing: the potential of realism. Journal of Advanced Nursing, 26 (6), 1262–1271.
Warshawsky, D. (2014). The potential for mixed methods: Results from the field in Urban South Africa. *The Professional Geographer*, 66(1), 160-168.
Westhrop G., Prins E., Kusters C. et al. (2011) Realist Evaluation: an Overview: Report From an Expert Seminar. Wageninen UR Centre for Development Innovation, The Netherlands.
Wilson V. & McCormack B. (2006) Critical realism as emancipatory action: the case for realistic evaluation in practice development. Nursing Philosophy, 7(1), 45– 57.
Williams, L., Rycroft-Malone, J., & Burton, C. R. (2017). Bringing critical realism to nursing practice: Roy Bhaskar's contribution. Nursing Philosophy, 18(2), e12130.
Yin, R. K. (2009). *Case study research: Design and methods* (4th ed). Thousand Oaks, CA: Sage.
Zhang, W., & Watanabe-Galloway, S. (2013). Using mixed methods effectively in prevention science: Designs, procedures, and examples. *Prevention Science, 15*(5), 654-662.

Chapter 3

Aboderin, I., & Hoffman, J. (2017). Research Debate on 'Older Carers and Work' in Sub-Saharan Africa? Current Gaps and Future Frames. Journal of cross-cultural gerontology, 32(3), 387-393.
Aboderin, I. (2010). Understanding and advancing the health of older populations in sub-Saharan Africa: policy perspectives and evidence needs. Public Health Reviews, 32(2), 357.
Adebowale, S. A., & Atte, O. (2012). Elderly well-being in a rural community in North Central Nigeria, sub-Saharan Africa. Public Health Research, 2(4), 92-101.
Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. American psychologist, 58(1), 5.
Agree EM, Biddlecom AE, Valente TW (2005). Intergenerational transfers of resources between older persons and extended kin in Taiwan and the Philippines.July; 59(2):181-95.
Akintola, O. (2004). A gendered analysis of the burden of care on family and volunteer caregivers in Uganda and South Africa. A Research Report. Durban: Health Economics and HIV/AIDS Research Division (HEARD). Retrieved from: www.heard.org.za
Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. Journal of Marriage and Family, 72, 650-666.

Amuyunzu-Nyamongo, M., & Ezeh, C. E. (2005). A qualitative assessment of support mechanisms in informal settlements. Journal of Poverty Innovations on Social, Political and Economic Inequalities, 9(3), 89−107
Ameh, S., Gómez-Olivé, F. X., Kahn, K., Tollman, S. M., & Klipstein-Grobusch, K. (2014). Predictors of health care use by adults 50 years and over in a rural South African setting. Global health action, 7(1), 24771.
Arber, S & Ginn, J. (1993). Gender and inequalities in health in later life. Social science & medicine 36.1: 33-46.
Aslund, C., Larm, P., Starrin, B., & Nilsson, K. W. (2014). The buffering effect of tangible social support on financial stress: influence on psychological well-being and psychosomatic symptoms in a large sample of the adult general population. International journal for equity in health, 13(1), 85.
Atkinson, S. (2011). Moves to measure wellbeing must support a social model of health. BMJ: British Medical Journal (Online), 343.
Bank, W. (2014). Uganda: social inclusion with middle-income status in sight. Washington DC: World Bank; 2014.
Beard, J. R., Officer, A., de Carvalho, I. A., Sadana, R., Pot, A. M., Michel, J. P., ... & Thiyagarajan, J. A. (2016). The World report on ageing and health: a policy framework for healthy ageing. The Lancet, 387(10033), 2145-2154.
Bennett, R., Chepngeno-Langat, G., Evandrou, M., & Falkingham, J. (2016). Gender differentials and old age survival in the Nairobi slums, Kenya. Social Science & Medicine, 163, 107-116.
Berkman, L. F., & Krishna, A. (2014). Social network epidemiology. In L. Berkman, I. Kawachi, & M. M. Glymour (Eds.), Social Epidemiology (2nd ed., pp. 234–289). New York: Oxford University Press
Bowen, G. L., & Jensen, T. M. (2017). Late-life divorce and postdivorce adult subjective well-being. Journal of Family Issues, 38(10), 1363-1388.
Blanchflower D, Oswald A. Is well-being U-shaped over the life cycle? (2008)., Social Science & Medicine; 66(8):1733–1749. doi: 10.1016/j.socscimed.2008.01.030 PMID: 18316146
Calys-Tagoe, B. N. I., Hewlett, S. A., Dako-Gyeke, P., Yawson, A. E., Bad-Doo, N. A., Seneadza, N. A. H., ... & Kowal, P. (2014). Predictors of subjective well-being among older Ghanaians. Ghana medical journal, 48(4), 178-184.
Caron, J. (2012). Predictors of quality of life in economically disadvantaged populations in Montreal. Social Indicators Research, 107(3), 411–427.
Cattell, R. B. (1966). The scree test for the number of factors. Multivariate behavioral research, 1(2), 245-276.
Cheung, C., & Ngan, R. M. (2011). Filtered life satisfaction and its socioeconomic determinants in Hong Kong. Social Indicators Research, 109(2), 223–242.
Chipperfield, J. G., & Havens, B. (2001). Gender differences in the relationship between marital status transitions and life satisfaction in later life. Journal of Gerontology: Psychological Sciences, 56, 176–186.
Cramm JM, Van Dijk HM and Nieboer AP (2013) The importance of neighborhood social cohesion and social capital for the well being of older adults in the community. *Gerontologist* 53(1): 142–152.
Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58(6), S327-S337

Deaton, A. S., & Tortora, R. (2015). People in Sub-Saharan Africa rate their health and health care among the lowest in the world. Health Affairs, 34(3), 519-527.
Deaton, A. (2013). The great escape: health, wealth, and the origins of inequality. Princeton University Press.
Deaton, A., & Stone, A. A. (2013). Grandpa and the snapper: the wellbeing of the elderly who live with children (No. w19100). National Bureau of Economic Research.
Denzin N (1978) The research act McGraw-Hill, New York
Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. Applied Psychology: Health and Well-Being, 3(1), 1-43.
Diener E, Oishi S, and Lucas RE. (2002). Subjective wellbeing: The science of happiness and life satisfaction. In Snyder CR. & Lopez SJ. (Ed.), Handbook of Positive Psychology. Oxford and New York: Oxford University Press.
Diener, E., Gohm, C. L., Suh, E., & Oishi, S. (2000). Similarity of relations between marital status and subjective well-being across cultures. Journal of Cross-Cultural Psychology, 3, 419–436.
Diener E, Suh EM, Lucas RE, and Smith HL (1999). Subjective well-being: Three decades of progress. Psychological Bulletin; 125: 276–301.
Doyal, L. (2000). Gender equity in health: debates and dilemmas. Social science & medicine, 51(6), 931-939.
Elliott, S. J., Dixon, J., Bisung, E., & Kangmennaang, J. (2017). A GLOWING footprint: Developing an index of wellbeing for low to middle income countries. International Journal of Wellbeing, 7(2).
Fantahun, M., et al., 2009. Ageing of a rural Ethiopian population: who are the survivors? Public Health 123 (4), 326e330
George, L. K. (2009). Still happy after all these years: Research frontiers on subjective well-being in later life. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *65*(3), 331-339.
Galdas, P. M., Cheater, F., & Marshall, P. (2005). Men and health help-seeking behaviour: literature review. Journal of advanced nursing, 49(6), 616-623.
Gomez-Olive, F. X., Thorogood, M., Clark, B., Kahn, K., & Tollman, S. (2013). Self-reported health and health care use in an ageing population in the Agincourt sub-district of rural South Africa. Global health action, 6(1), 19305.
Graham, C., & Chattopadhyay, S. (2013). Gender and well-being around the world. International Journal of Happiness and Development, 1(2), 212-232.
Graham, C. & Lora, E. (2009). Paradox and Perception: Measuring Quality of Life in Latin America. Washington, D.C.: The Brookings Institution Press.
Graham H. Social determinants and their unequal distribution. Milbank Quarterly, 2004, 82(1):101-24.
Gureje, O., Kola, L., Afolabi, E., & Olley, B. O. (2008). Determinants of quality of life of elderly Nigerians: results from the Ibadan study of ageing. African journal of medicine and medical sciences, 37(3), 239.
Gureje, O., Ogunniyi, A., Kola, L., & Afolabi, E. (2006). Functional disability in elderly Nigerians: results from the Ibadan Study of Aging. *Journal of the American Geriatrics Society*, *54*(11), 1784-1789.
Guttman, L. (1954). An outline of some new methodology for social research. Public Opinion Quarterly, 18(4), 395-404.

Harling, G., Perkins, J. M., Gómez-Olivé, F. X., Morris, K. A., Wagner, R. G., Montana, L., … Berkman, L. F. (2017). Interviewer-driven variability in social network reporting: results from Health and Aging in Africa: A longitudinal study of an INDEPTH community (HAALSI) in South Africa. Field Methods.
Hickey, S., & Bukenya, B. (2016). The politics of promoting social cash transfers in Uganda.
Howley P, Neill SO & Atkinson R (2015) Who needs good neighbors? *Environment and Planning A 47*(4): 939–956.
Ice, G. H., Yogo, J., Heh, V., & Juma, E. (2009). The impact of caregiving on the health and well-being of Kenyan Luo grandparents. *Research on Aging, 32*, 40–66.
Jivraj, S., Nazroo, J., Vanhoutte, B., & Chandola, T. (2014). Aging and subjective well-being in later life. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences.
Jivraj, S., & Nazroo, J. (2014). Determinants of socioeconomic inequalities in subjective well-being in later life: a cross-country comparison in England and the USA. *Quality of Life Research*, *23*(9), 2545-2558.
Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and psychological measurement*, *20*(1), 141-151.
Kasedde, S., Doyle, A. M., Seeley, J. A., & Ross, D. A. (2014). They are not always a burden: Older people and child fostering in Uganda during the HIV epidemic. Social Science & Medicine, 113, 161-168.
Kim, J. (2010) Neighborhood disadvantage and mental health: The role of neighborhood disorder and social relationships. Social Science Research 39(2): 260–271.
Kloos, B & Townley, G. (2011) Investigating the relationship between neighborhood experiences and psychiatric distress for individuals with serious mental illness. *Administration and Policy in Mental Health* 38(2): 105–116.
Knodel, J., Ofstedal., M. (2003). Gender and aging in the developing world: Where are the men?. Population and development review 29.4, 677-698.
Knodel, J., Watkins, S., & VanLandingham, M. (2003). AIDS and older persons: An international perspective. *Journal of Acquired Immune Deficiency Syndromes, 33*, S153–S165.
Kowal, P., Chatterji, S., Naidoo, N., Biritwum, R., Fan, W., Ridaura, R. L., … Williams, S. (2012). Data resource profile: The World Health Organization Study on global AGEing and adult health (SAGE). International Journal of Epidemiology, 41(6), 1639–1649.
Kowal, P., Kahn, K., Ng, N., Naidoo, N., Abdullah, S., Bawah, A., ... & Xavier Gomez-Olive, F. (2010). Ageing and adult health status in eight lower-income countries: the INDEPTH WHO-SAGE collaboration. Global health action, 3(1), 5302.
Lau, DT, & Machizawa, S. (2012). Informal and formal support among community-dwelling Japanese American elders living alone in Chicagoland: An in-depth qualitative study. *Journal of Cross- Cultural Gerontology* 27(2): 149–161.
Luy, M., Minagwa, Y., (2014). Gender gaps-life expectancy and proportion of life in poor health. Health Rep. 25 (12), 12e19.
Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Re-examining adaptation and the set-point model of happiness: Reactions to changes in marital status. Journal of Personality and Social Psychology, 84, 527–539.
Manderson, L., & Block, E. (2016). Relatedness and care in Southern Africa and beyond.
Marmot, M., Wilkinson, R.G., 2000. Social Determinants of Health. University Press, Oxford, Oxford.

Meggiolaro, S. (2013). Life satisfaction among the elderly in Italy in a gender approach. Working Paper Series, N.6. Department of Statistical Science, University of Padua, Italy.
Ministry of Gender, Labour and Social Development (MGLSD). (2013). National Plan of Action for Older Persons 2012/13–2016/17. Republic of Uganda: Ministry of Gender, Labour and Social Development.
Ministry of Gender, Labour & Social Development. (2009). National policy for older persons: Ageing with security and dignity. Kampala: Ministry of Gender, Labour & Social Development.
Moore S et al. (2006). Lost in translation: a genealogy of the "social capital" concept in public health. Journal of Epidemiology and Community Health, 60:729-34.
Mroczek DK., and Spiro A (2005). Change in life satisfaction during adulthood: Findings from the Veterans Affairs Normative Aging Study. *Journal of Personality and Social Psychology.* 2005; 88:189–302
Mudege, N. N., & Ezeh, A. C. (2009). Gender, aging, poverty and health: survival strategies of older men and women in Nairobi slums. Journal of Aging Studies, 23(4), 245-257.
Mugisha, J., Scholten, F., Owilla, S., Naidoo, N., Seeley, J., Chatterji, S., ... & Boerma, T. (2013). Caregiving responsibilities and burden among older people by HIV status and other determinants in Uganda. AIDS care, 25(11), 1341-1348.
Mukwaya, P., & Bamutaze, Y. (2012). Rural-urban transformation in Uganda.
Narayan, D. (2002). Bonds and bridges: social capital and poverty. Social capital and economic development: well-being in developing countries. Northampton, MA: Edward Elgar, 58-81.
Naidoo, Nirmala, Abdullah, Salim, Bawah, Ayaga, Binka, Fred, Chuc, Nguyen TK, Debpuur, Cornelius, … Van Minh, Hoang. (2010). Ageing and adult health status in eight lower-income countries: The INDEPTH WHO-SAGE collaboration. Global Health Action, S2, 11–22.
Naumann VJ, Byrne GJA (2004). WHOQOL-BREF as a measure of quality of life in older patients with depression. International Psychogeriatrics. 2004; 16:159–173.
Netuveli, G., Wiggins, R. D., Hildon, Z., Montgomery, S. M., & Blane, D. (2006). Quality of life at older ages: evidence from the English longitudinal study of aging (wave 1). Journal of Epidemiology and Community Health, 60(4), 357–363.
Nightingale, Andrea J. (2003). A feminist in the forest: Situated knowledges and mixing methods in natural resource management.
Nyirenda, M., Chatterji, S., Falkingham, J., Mutevedzi, P., Hosegood, V., Evandrou, M., ... & Newell, M. L. (2012). An investigation of factors associated with the health and well-being of HIV-infected or HIV-affected older people in rural South Africa. BMC public health, 12(1), 259.
Oksuzyan, A., et al., (2009). The male-female health-survival paradox: a survey and register study of the impact of sex-specific selection and information bias. Ann. Epidemiol. 19, 504e511.
Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. The Journal of Positive Psychology, 3(2), 137-152.
Perkins, J. M., Subramanian, S., & Christakis, N. A. (2015). Social networks and health: A systematic review of sociocentric network studies in low- and middle-income countries. Social Science & Medicine, 125, 60–78.
Pinquart, M., & Sörensen, S. (2001). Gender differences in self-concept and psychological well-being in old age: A meta-analysis. The Journals of Gerontology Series B: Psychological sciences and social sciences, 56(4), P195-P213.

Pinquart M, and Sorensen S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. Psychology and Aging ;15: 187– 224.
Popay J. (2000). Social capital: the role of narrative and historical research. Epidemiology and Community Health, 54:401.
Preacher, K. J., & Hayes, A. F. (2008). Assessing mediation in communication research. The Sage sourcebook of advanced data analysis methods for communication research, 13-54.
Putnam R. (2000). Bowling alone: The collapse and revival of American community. New York, Simon & Schuster.
Ralston, M., Schatz, E., Menken, J., Gómez-Olivé, F. X., & Tollman, S. (2015). Who benefits—Or does not—From South Africa's old age pension? Evidence from characteristics of rural pensioners and non-pensioners. *International journal of environmental research and public health, 13*(1), 85.
Read, S., Grundy, E., & Foverskov, E. (2016). Socio-economic position and subjective health and well-being among older people in Europe: a systematic narrative review. *Aging & mental health, 20*(5), 529-542.
Robinette, J. W., Charles, S. T., Mogle, J. A., & Almeida, D. M. (2013). Neighborhood cohesion and daily well-being: Results from a diary study. *Social science & medicine*, *96*, 174-182.
Sadana, R., Blas, E., Budhwani, S., Koller, T., & Paraje, G. (2016). Healthy ageing: raising awareness of inequalities, determinants, and what could be done to improve health equity. *The Gerontologist, 56*(Suppl_2), S178-S193.
Scholten, F., Mugisha, J., Seeley, J., Kinyanda, E., Nakubukwa, S., Kowal, P., ... & Grosskurth, H. (2011). Health and functional status among older people with HIV/AIDS in Uganda. *BMC Public Health, 11*(1), 886.
Schwanen, T., & Wang, D. (2014). Well-being, context, and everyday activities in space and time. Annals of the Association of American Geographers, 104(4), 833-851.
Schatz, E., & Seeley, J. (2015). Gender, ageing and carework in East and Southern Africa: A review. Global public health, 10(10), 1185-1200.
Schatz, E., & Ogunmefun, C. (2007). Caring and contributing: The role of older women in rural South African multi-generational households in the HIV/AIDS era. World Development, 35(8), 1390–1403. http://dx.doi.org/10.1016/j.worlddev.2007.04.004
Seeley J, Dercon S, Barnett T (2010). The effects of HIV/AIDS on rural communities in East Africa: a 20-year perspective. Trop Med Int Health. 2010 Mar; 15(3):329-35.
Skevington, SM, Lotfy, M, O'Connell, KA. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial A Report from the WHOQOL Group. Quality of Life Research.13: 299–310
Solar, O., & Irwin, A. (2010). A conceptual framework for action on the social determinants of health.
Steptoe, A., Deaton, A., & Stone, A. A. (2015). Subjective wellbeing, health, and ageing. The Lancet, 385(9968), 640-648.
Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2009). The Measurement of Economic Performance and Social Progress Revisited - Reflections and Overview, 79.
Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. Proceedings of the National Academy of Sciences, 107(22), 9985-9990.

Tam, W. J., & Yap, P. (2017). Health care for older adults in Uganda: lessons for the developing world. Journal of the American Geriatrics Society, 65(6), 1358-1361.
Taniguchi, H., & Potter, D. A. (2016). Who are your neighbors? Neighbor relationships and subjective well-being in Japan. Applied Research in Quality of Life, 11(4), 1425-1443.
Tomaney, J. (2017). Region and place III: Well-being. Progress in Human Geography, 41(1), 99-107.
Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. Journal of Health and Social Behavior, 52, 145–161. doi:10.1177/0022146510395592
United Nations, Department of Economic and Social Affairs, Population Division (UNDESA) (2015). World Population Prospects: The 2015 Revision, Key Findings and Advance Tables. Working Paper No. ESA/P/WP.241.
Uganda Bureau of Statistics (UBS). (2015) Statistical Abstract. Kampala: Uganda Bureau of Statistics.
Uganda Bureau of Statistics (UBS) (2012). Uganda demographic and health survey 2011. Kampala: Uganda.
United Nations Development Plan (UNDP) (2016). Africa Human Development Report 2016 Accelerating Gender Equality and Women's Empowerment in Africa.
United Nations Economic Commission for Europe (UNECE). (2009). Gender Equality, Work and Old Age Policy Brief of Ageing No. 2. United Nations Economic Commission for Europe, Geneva.
Ulloa, B. F. L., Møller, V., & Sousa-Poza, A. (2013). How does subjective well-being evolve with age? A literature review. Journal of Population Ageing, 6(3), 227-246.
Wiggins, R. D., Higgs, P. F. D., Hyde, M., & Blane, D. B. (2004). Quality of life in the third age: Key predictors of the CASP-19 measure. Ageing and Society, 24(5), 693–708.
WHO. (2016) Global Strategy and Action Plan on Aging and Health (2016-2020).
Wilkinson, R.G., Marmot, M., 2003. Social Determinants of Health: the Solid Facts.
WHO. (2015). World report on ageing and health. Geneva, Switzerland: World Health Organization. Retrieved from http://www.who.int/ageing/publications/world-report-2015/en/
Yang, Y. (2008). Social inequalities in happiness in the United States, 1972 to 2004: An age-period-cohort analysis. American Sociological Review, 73, 204–236.

Chapter 4

Aboderin, I. (2016). Coming Into Its Own? Developments and Challenges for Research on Aging in Africa. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, gbw017.
Baxter, J., & Eyles, J. (1997). Evaluating qualitative research in social geography: establishing 'rigour' in interview analysis. *Transactions of the Institute of British Geographers, 22*(4), 505-525.
Braubach M, Power A. Housing conditions and risk: reporting on a European study of housing quality and risk of accidents for older people. J Hous Elder. 2011;25(3):288–305.
Coleman, T., & Kearns, R. (2015). The role of bluespaces in experiencing place, aging and wellbeing: Insights from Waiheke Island, New Zealand. Health & Place, 35, 206-217.
Dey, I. (2012). Grounding grounded theory: Guidelines for qualitative inquiry. Crane Library at the University of British Columbia.
Drummond, M. P., Thakoor, V., & Yu, S. (2014). Africa rising: Harnessing the demographic dividend (No. 14-143). International Monetary Fund.

Dugarova, E. (2017). Ageing, Older Persons And The 2030 Agenda For Sustainable Development. United Nations Development Programme; New York.
European Union. (2000). Council directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation. Brussels: Council of the European Union.
Golaz, V., Wandera, S.O., Rutaremwa, G.. (2015). Understanding the vulnerability of older adults: extent of and breaches in support systems in Uganda. Ageing and Society:1–27.
Government of Uganda (2015). Second National Development Plan (NDPII) 2015/16 – 2019/20 Uganda Vision 2040 "A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years". Available: https://www.ugandainvest.go.ug/wp-content/uploads/2016/03/National-Development-Plan-2015-16-to-2019-20.pdf
Government of Uganda (GOU) (2014): Draft National Social Protection Policy/
Hery, A. (2016). Uganda Poverty Assessment Report. The Work Bank.
Ice, G. H., Sadruddin, A. F., Vagedes, A., Yogo, J., & Juma, E. (2012). Stress associated with caregiving: An examination of the stress process model among Kenyan Luo elders. *Social Science & Medicine*, *74*(12), 2020-2027.
Hickey, S., & Bukenya, B. (2016). The politics of promoting social cash transfers in Uganda.
Integrated Food Security Phase Classification (IPC). (2017). Uganda- Current Acute Food Insecurity Situation.
Kasedde, S., Doyle, A. M., Seeley, J. A., & Ross, D. A. (2014). They are not always a burden: Older people and child fostering in Uganda during the HIV epidemic. Social Science & Medicine, 113, 161-168
Kearns, R. & Moon, G. (2002). From medical to health geography: novelty, place and theory after a decade of change. *Progress in Human Geography 26*, 605–25.
Kikafunda, J. K., & Lukwago, F. B. (2005). Nutritional status and functional ability of the elderly aged 60 to 90 years in the Mpigi district of central Uganda. *Nutrition*, *21*(1), 59-66.
King, B., & Winchester, M. S. (2018). HIV as social and ecological experience. Social Science & Medicine, 208, 64-71.
King, B. (2015). Political ecologies of disease and health. In: The Routledge Handbook of Political Ecology. Taylor and Francis Inc.
King, B. (2010). Political ecologies of health. *Progress in Human Geography*, *34*(1), 38-55.
Kinyanda, E., Kuteesa, M., Scholten, F., Mugisha, J., Baisley, K. & Seeley, J. "Risk of Major Depressive Disorder among Older Persons Living in HIV-Endemic Central and Southwestern Uganda." AIDS Care 28, no. 12 (December 2016): 1516–21.
Lansley P, McCreadie C, Tinker A. (2004). Can adapting the homes of older people and providing assistive technology pay its way? Age Ageing.33(6):571–6.
Lloyd-Sherlock, P. G., Ebrahim, S., McKee, M. et al. (2016). Institutional ageism in global health policy. *BMJ*, *354*, i4514.
Lytle, L. A., Ward, J., Nader, P. R., et al., (2003). Maintenance of a health promotion program in elementary schools: results from the CATCH-ON study key informant interviews. *Health Education & Behavior*, *30*(4), 503-518.
Maniragaba, F., Nzabona, A., Asiimwe, J. B., Bizimungu, E., Mushomi, J., Ntozi, J., & Kwagala, B. (2019). Factors associated with older persons' physical health in rural Uganda. PloS one, 14(1), e0209262.

Means, R., (2007). Safe as houses? Ageing in place and vulnerable older people in the UK. *Social Policy Administration 41* (1), 65e8.
Merttens, F., Sindou, E., Lipcan, A., Pellerano, L., Binci, M., Ssewanyana, S., ... & Garbarino, S. (2016). Evaluation of the Uganda Social Assistance Grants for Empowerment (SAGE) Programme–Impact after Two Years of Programme Operations 2012-2014: Final Report. London: Oxford Policy Management.
Miles, M.B., Huberman, M., Saldana, J. (2014). Qualitative Data Analysis: A Methods Sourcebook. SAGE, Thousand Oaks.
Ministry of Health (MOH). (2014). Uganda Hospital and Health Centre IV Census Survey.
Mkandawire, P., Richmond, C., Dixon, J., et al. (2013). Hepatitis B in Ghana's upper west region: a hidden epidemic in need of national policy attention. *Health & Place*, *23*, 89-96.
MoGLSD (2012). *National Plan of Action for Older Persons 2012/13-2016/17*. Republic of Uganda: Ministry of Gender, Labour and Social Development.
Monasch, R., Boerma, J.T.(2004). Orphanhood and childcare patterns in sub-Saharan Africa: an analysis of national surveys from 40 countries. *AIDS 18,* S55eS65.
Mugisha, J. O., Schatz, E., Seeley, J., & Kowal, P. (2015). Gender perspectives in care provision and care receipt among older people infected and affected by HIV in Uganda. African Journal of AIDS Research, 14(2), 159-167.
Nabaitu, J., Bachengana, C., & Seeley, J. (1994). Marital instability in a rural population in south-west Uganda: implications for the spread of HIV-1 infection. Africa, 64(2), 243-251.
Nalwanga, R., & Lund, R. (2018). Examining the impacts of grants on senior citizen beneficiaries in Kiboga District, Uganda. Development in Practice, 28(6), 775-784.
National Planning Authority (NPA). (2014). Report: Harnessing the Demographic Dividend.
Neely, A. H. (2015). Internal ecologies and the limits of local biologies: A political ecology of tuberculosis in the time of AIDS. *Annals of the Association of American Geographers*, *105*(4), 791-805.
Nyantakyi-Frimpong, H., Arku, G., & Inkoom, D. K. B. (2016). Urban agriculture and political ecology of health in municipal Ashaiman, Ghana. *Geoforum*, *72*, 38-48.
Nzabona, A., Ntozi, J., & Rutaremwa, G. (2016). Loneliness among older persons in Uganda: examining social, economic and demographic risk factors. Ageing & Society, 36(4), 860-888.
Palmore, E. (2005). Three decades of research on ageism. Generations, 29(3), 87-90.
Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative social work*, *1*(3), 261-283.
Peet, R., & Watts, M. (2004). *Liberation ecologies: environment, development and social movements*. Routledge.
Robbins, P. (2011). Political ecology: A critical introduction (Vol. 16). John Wiley & Sons.
Rutakumwa, R., Zalwango, F., Richards, E., & Seeley, J. (2015). Exploring the care relationship between grandparents/older carers and children infected with HIV in south-western Uganda: Implications for care for both the children and their older carers. International journal of environmental research and public health, 12(2), 2120-2134.
Sánchez-González, D. and Rodríguez-Rodríguez, V. (eds). (2016) Environmental gerontology in Europe and Latin America: Policies and perspectives on environment and aging. New York: Springer.
Scharf, T. and Keating, N. (2012). Social exclusion in later life: A global challenge, in T. Scharf and N. Keating (eds.). From exclusion to inclusion in old age: A Global Challenge. pp. 1-16. Bristol: Policy Press.

Schatz, E., Seeley, J., Negin, J., Weiss, H. A., Tumwekwase, G., Kabunga, E., ... & Mugisha, J. (2019). "For us here, we remind ourselves": strategies and barriers to ART access and adherence among older Ugandans. *BMC public health, 19*(1), 131.
Schatz, E., Seeley, J., & Zalwango, F. (2018a). Intergenerational care for and by children: Examining reciprocity through focus group interviews with older adults in rural Uganda. *Demographic research, 38*, 2003-2026.
Schatz, E., Seeley, J., Negin, J., & Mugisha, J. (2018b). They 'don't cure old age': older Ugandans' delays to health-care access. *Ageing & Society, 38*(11), 2197-2217.
Schatz, E., Madhavan, S., Collinson, M., et al. (2015). Dependent or productive? A new approach to understanding the social positioning of older South Africans through living arrangements. *Research on Aging, 37*(6), 581-605.
Seeley, J., Wolff, B., Kabunga, E., Tumwekwase, G., & Grosskurth, H. (2009). 'This is where we buried our sons': people of advanced old age coping with the impact of the AIDS epidemic in a resource-poor setting in rural Uganda. Ageing & Society, 29(1), 115-134.
Skinner, M. W., & Joseph, A. E. (2007). The evolving role of voluntarism in ageing rural communities. *New Zealand Geographer, 63*(2), 119-129.
Strauss, A., & Corbin, J. (1998). Basics of qualitative research: Procedures and techniques for developing grounded theory.
Sultana, F. (2012) Producing contaminated citizens: Toward a nature–society geography of health and well-being. *Annals of the Association of American Geographers 102*(5): 1165–1172.
Suzman, R. (2010). Guest Editorial: The INDEPTH WHO-SAGE multicentre study on ageing, health and well-being among people aged 50 years and over in eight countries in Africa and Asia. *Global Health Action, 3*.
Ssengonzi, R. (2007). The plight of older persons as caregivers to people infected/affected by HIV/AIDS: evidence from Uganda. Journal of Cross-Cultural Gerontology, 22(4), 339-353.
Stephens, R. (2016). "Whether They Promised Each Other Some Thing Is Difficult to Work Out": The Complicated History of Marriage in Uganda. African Studies Review, 59(1), 127-153.
Stewart, F, Dall'Olio, A.M., Eberhard, A, Borg, A. H., Bronchi, C., Sebudde, R. K., Morisset, J. et al. (2014). Reducing Old Age and Economic Vulnerabilities: Why Uganda Should Improve Its Pension System. The World Bank.
Uganda Bureau of Statistics (UBOS), (2016). National population and housing census 2014—main report. Uganda Bureau of Statistics (UBOS): Kampala, Uganda.
United Nations, Department of Economic and Social Affairs, Population Division (UNDESA) (2015). World Population Prospects: The 2015 Revision, Key Findings and Advance Tables. Working Paper No. ESA/P/WP.241.
Golaz, V., Wandera, S.O., & Rutaremwa, G. (2017). Understanding the vulnerability of older adults: Extent of and breaches in support systems in Uganda. Ageing and Society 37(1): 63–89. d
Wandera, S. O., Golaz, V., Kwagala, B., & Ntozi, J. (2015a). Factors associated with self-reported ill health among older Ugandans: a cross sectional study. Archives of gerontology and geriatrics, 61(2), 231-239.
Wandera, S. O., Kwagala, B., & Ntozi, J. (2015b). Prevalence and risk factors for self-reported non-communicable diseases among older Ugandans: a cross-sectional study. Global health action, 8(1), 27923.

Wandera, S. O., Ntozi, J., & Kwagala, B. (2014). Prevalence and correlates of disability among older Ugandans: evidence from the Uganda National Household Survey. Global health action, 7(1), 25686.
Wiles, J. L., Allen, R. E., Palmer, et al. (2009). Older people and their social spaces: A study of well-being and attachment to place in Aotearoa New Zealand. *Social Science & Medicine*, *68*(4), 664-671.
Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. (2012). The meaning of "aging in place" to older people. *The Gerontologist*, 52(3), 357-366.
Winthrop, M., Kajumba, T., McIvor, S., (2018). Uganda Country Climate Risk Assessment Report. Irish Aid, Resilience and Economic Inclusion Team, Policy Unit.
WHO. (2017). Promoting Healthy Ageing in the African Region. WHO Regional Office for Africa.
WHO. (2015). World report on ageing and health. World Health Organization.
WHO. (2014). Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s.
Wright S, Zalwango F, Seeley J, Mugisha J, Scholten F. 2012. Despondency among HIV-positive older men and women in Uganda. Journal of Cross-Cultural Gerontology 27: 319–333.

Chapter 5

Aboderin, I. (2014). Sexual and reproductive health and rights of older men and women: addressing a policy blind spot. Reproductive health matters, 22(44), 185-190.
Andrews, G. J., Kearns, R. A., Kontos, P., & Wilson, V. (2006). 'Their finest hour': older people, oral histories, and the historical geography of social life. Social & cultural geography, 7(2), 153-177.
Asiimwe, F. A., & Crankshaw, O. (2011). The impact of customary laws on inheritance: A case study of widows in Urban Uganda. Journal of Law and Conflict Resolution, 3(1), 7-13.
Arber, S., Davidson, K., & Ginn, J. (2003). *Gender and ageing: Changing roles and relationships: Changing roles and relationships*. McGraw-Hill Education (UK).
Atchley, R. C. (1989). A continuity theory of normal aging. The gerontologist, 29(2), 183-190.
Baxter, J., & Eyles, J. (1997). Evaluating qualitative research in social geography: establishing 'rigour' in interview analysis. *Transactions of the Institute of British geographers*, *22*(4), 505-525.
Belli RF.(1998). The structure of autobiographical memory and the event history calendar: potential improvements in the quality of retrospective reports in surveys. Memory. 6(4):383–406.
Bergman, L., J., Paulson, S., & Mugenyi, M. S. (2012). New seeds, gender norms and labor dynamics in Hoima District, Uganda. Journal of Eastern African Studies, 6(3), 405-422.
Blaikie, P., & Brookfield, H. (1987). Defining and debating the problem. *Land degradation and society/Piers Blaikie and Harold Brookfield with contributions by Bryant Allen...[et al.]*.
Bryant, R. L. (1998). Power, knowledge and political ecology in the third world: a review. *Progress in physical geography*, *22*(1), 79-94.
Burton-Jeangros, C., Cullati, S., Sacker, A., & Blane, D. (Eds.) (2015). A life course perspective on health trajectories and transitions (Vol. 4). Springer.
Butler, J. (1990). Gender trouble, feminist theory, and psychoanalytic discourse. Feminism/ postmodernism, 327, x.
Cacioppo, J. T., Hawkley, L. C., Norman, G. J., & Berntson, G. G. (2011). Social isolation. Annals of the New York Academy of Sciences, 1231(1), 17-22.
Calasanti, T., & Giles, S. (2018). The challenge of intersectionality. Generations, 41(4), 69-74.

Calasanti, T. M., & Slevin, K. F. (2013). *Age matters: Re-aligning feminist thinking*. Routledge.
Calasanti, T. (2004). Feminist gerontology and old men. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 59(6), S305-S314.
Cancian, F. M., & Oliker, S. J. (2000). Caring and gender. Lanham, CA: Rowman & Littlefield.
Chrisler, J. C., Barney, A., & Palatino, B. (2016). Ageism can be hazardous to women's health: Ageism, sexism, and stereotypes of older women in the healthcare system. *Journal of Social Issues*, *72*(1), 86-104.
Connell, R. (2012). Gender, health and theory: conceptualizing the issue, in local and world perspective. Social science & medicine, 74(11), 1675-1683.
Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 58, S327–S337.
Davidson, P. M., DiGiacomo, M., & McGrath, S. J. (2011). The feminization of aging: how will this impact on health outcomes and services?. Health care for women international, 32(12), 1031-1045.
Denzin N 1978 The research act McGraw-Hill, New York
Etherington, N. (2016). Gender and Health Over the Life Course: Temporal, Contextual, and Intersectional Considerations.
Elder, G., Kirkpatrick, M.J.& Crosnoe R. (2003). The Emergence and Development of Life Course Theory. In: Jeylan T. Mortimer and Michael J. Shanahan (ed.). Handbook of the Life Course. Springer, 2003, pp. 3–19.
Elmhirst, R. (2015). Feminist political ecology. In: *The Routledge handbook of gender and development* (pp. 82-90). Routledge.
Finlay, J., Franke, T., McKay, H., & Sims-Gould, J. (2015). Therapeutic landscapes and wellbeing in later life: Impacts of blue and green spaces for older adults. *Health & Place*, *34*, 97-106.
Gap, G. G. (2017). World economic forum. Cologny/Geneva. Available at: http://www3.weforum.org/docs/WEF_GGGR_2017.pdf
Guloba, D., Katunze, M., Ssewanyana, D., Ahikire, P., Musiimenta, D., Boonabaana, D., & Ssennono, V. (2018). Gender Roles and the Care Economy in Ugandan Households: The case of Kaabong, Kabale and Kampala districts.
Harling, G., Morris, K., Manderson, L., Perkins, J., & Berkman, L. (2017). Age and gender differences in social network composition and social support among older rural South Africans: Findings from the HAALSI study.
Hawkley LC, Thisted RA, Masi CM, Cacioppo JT. (2010). Loneliness predicts increased blood pressure: 5-year cross-lagged analyses in middle-aged and older adults. Psychol Aging. 25(1):132-141.
Hennegan, J., Dolan, C., Wu, M., Scott, L., & Montgomery, P. (2016). Measuring the prevalence and impact of poor menstrual hygiene management: a quantitative survey of schoolgirls in rural Uganda. BMJ open, 6(12), e012596.
Holtermann, A., Krause, N., Van Der Beek, A. J., & Straker, L. (2018). The physical activity paradox: six reasons why occupational physical activity (OPA) does not confer the cardiovascular health benefits that leisure time physical activity does.
Hopkins PE and Pain R (2007) Geographies of age: Thinking relationally. Area 39: 287–94.
Horschelmann K (2011) Theorizing life transitions: Geographical perspectives. Area 43: 378–383.

Institute of Health Metric Evaluation (IHME) (2017). GBD PROFILE: UGANDA. Available at: http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_uganda.pdf
Krug EG, Dahlberg LL, Mercy JA, et al. (2002). World report on violence and health. Geneva: World Health Organization.
Li, J., Loerbroks, A., & Angerer, P. (2013). Physical activity and risk of cardiovascular disease: what does the new epidemiological evidence show?. Current opinion in cardiology, 28(5), 575-583.
Lytle, L. A., Ward, J., Nader, P. R., et al., (2003). Maintenance of a health promotion program in elementary schools: results from the CATCH-ON study key informant interviews. *Health education & behavior*, *30*(4), 503-518.
MacKinnon, D., & Derickson, K. D. (2013). From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, *37*(2), 253-270.
Merttens, F., Sindou, E., Lipcan, A., Pellerano, L., Binci, M., Ssewanyana, S., ... & Garbarino, S. (2016). Evaluation of the Uganda Social Assistance Grants for Empowerment (SAGE) Programme–Impact after Two Years of Programme Operations 2012-2014: Final Report. London: Oxford Policy Management.
MoGLSD (2012). *National Plan of action for older persons 2012/13-2016/17*. Republic of Uganda: Ministry of Gender, Labour and Social Development.
Milligan, C., Neary, D., Payne, S., Hanratty, B., Irwin, P., & Dowrick, C. (2016). Older men and social activity: a scoping review of Men's Sheds and other gendered interventions. Ageing & Society, 36(5), 895-923.
Milligan, C., Payne, S., Bingley, A., & Cockshott, Z. (2015). Place and wellbeing: shedding light on activity interventions for older men. Ageing & Society, 35(1), 124-149.
Milligan, C., & Bingley, A. (2007). Restorative places or scary spaces? The impact of woodland on the mental well-being of young adults. Health & place, 13(4), 799-811.
Miller, W. L., & Crabtree, B. F. (2004). Depth interviewing. Approaches to qualitative research: A reader on theory and practice, 185-202.
Miiro, G., Rutakumwa, R., Nakiyingi-Miiro, J., Nakuya, K., Musoke, S., Namakula, J., ... & Weiss, H. A. (2018). Menstrual health and school absenteeism among adolescent girls in Uganda (MENISCUS): a feasibility study. BMC women's health, 18(1), 4.
Mudege, N. N., & Ezeh, A. C. (2009). Gender, aging, poverty and health: survival strategies of older men and women in Nairobi slums. Journal of Aging Studies, 23(4), 245-257.
Mugisha, J., Scholten, F., Owilla, S., Naidoo, N., Seeley, J., Chatterji, S., ... & Boerma, T. (2013). Caregiving responsibilities and burden among older people by HIV status and other determinants in Uganda. AIDS care, 25(11), 1341-1348.
Nannyonga-Tamusuza, S. (2009). Female-men, male-women, and others: constructing and negotiating gender among the Baganda of Uganda. Journal of Eastern African Studies, 3(2), 367-380.
National Planning Authority. (NPA). (2017). Government of Uganda. SDG2 Strategic Review Report 2017: Towards Zero Hunger in Uganda.
Nyanzi, S. (2011). Ambivalence surrounding elderly widows' sexuality in urban Uganda. Ageing International, 36(3), 378-400.
Nyanzi, S., Emodu-Walakira, M., & Sserwaniko, W. (2009). The widow, the will and widow-inheritance in Kampala: revisiting victimization arguments. Canadian Journal of African Studies, 43, 12–33.

Nyanzi, S. (2009). Widowed mama-grannies buffering HIV/AIDS-affected households in a city slum of Kampala, Uganda. Gender and Development, 17(3), 467–479.
Nzabona, A., Ntozi, J., & Rutaremwa, G. (2016). Loneliness among older persons in Uganda: examining social, economic and demographic risk factors. Ageing & Society, 36(4), 860-888.
O'Reilly, K., 2010. Combining sanitation and women's participation in water supply: an example from Rajasthan. Development in Practice 20 (1), 45–56.
Otiso, K. M. (2006). Culture and customs of Uganda. (pp. 81-98). Greenwood Press.
Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative social work*, *1*(3), 261-283.
Paz, A., Doron, I., & Tur-Sinai, A. (2018). Gender, aging, and the economics of "active aging": Setting a new research agenda. Journal of women & aging, 30(3), 184-203.
Pearce, J. R. (2018). Complexity and uncertainty in geography of health research: incorporating life-course perspectives. *Annals of the American Association of Geographers*, *108*(6), 1491-1498.
Robbins, P. (2011). *Political ecology: A critical introduction*(Vol. 16). John Wiley & Sons.
Rocheleau, D., Thomas-Slayter, B., & Wangari, E. (1996). Gender and environment. *Feminist political ecology: Global issues and local experiences*, 4-5.
Richards, E., Zalwango, F., Seeley, J., Scholten, F., & Theobald, S. (2013). Neglected older women and men: Exploring age and gender as structural drivers of HIV among people aged over 60 in Uganda. African Journal of AIDS Research, 12(2), 71-78.
Rishworth, A., Elliott, S.J., Kangmennaang, J. (2019) (accept with revisions). Social Determinants of Subjective Wellbeing Among the Elderly: A Case Study of Uganda. International Journal of Wellbeing.
Schooler, D., Ward, L. M., Merriwether, A., & Caruthers, A. S. (2005). Cycles of shame: Menstrual shame, body shame, and sexual decision-making. Journal of Sex Research, 42, 324–334.
Schatz, E., & Seeley, J. (2015). Gender, ageing and carework in East and Southern Africa: A review. Global public health, 10(10), 1185-1200.
Schatz, E., & Ogunmefun, C. (2007). Caring and contributing: The role of older women in multigenerational households in the HIV/AIDS era. World Development, 35, 1390–1403.
Schwanen T, Hardill I and Lucas S (2012) Spatialities of ageing: The co-construction and co-evolution of old age and space. Geoforum 43: 1291–1295.
Shand, T., Thomson-de Boor, H., van den Berg, W., Peacock, D., & Pascoe, L. (2014). The HIV Blind Spot: Men and HIV Testing, Treatment and Care in Sub-Saharan Africa. IDS Bulletin, 45(1), 53-60.
Skinner, M. W., Cloutier, D., & Andrews, G. J. (2015). Geographies of ageing: Progress and possibilities after two decades of change. Progress in Human Geography, 39(6), 776-799.
Steptoe, A., Deaton, A., & Stone, A. A. (2015). Subjective wellbeing, health, and ageing. *The Lancet*, *385*(9968), 640-648.
Strauss, A., & Corbin, J. (1998). Basics of qualitative research: Procedures and techniques for developing grounded theory.
Stubbs, M. L. (2008). Cultural perceptions and practices around menarche and adolescent menstruation in the United States. Annals of the New York Academy of Sciences, 1135, 58–88
Truelove, Y. (2011). (Re-) Conceptualizing water inequality in Delhi, India through a feminist political ecology framework. *Geoforum*, *42*(2), 143-152.
UBS (2017). Women and Men in Uganda Facts and Figures 2016. Kampala Uganda.
UBS (2013). Uganda Facts and Figures on Gender. Kampala Uganda.

UN. (2015). World Population Prospects: The 2015 Revision.
UN. (2002). *Report of the Second World Assembly on Ageing. Madrid, 8-12 April 2002.* Publication A/CONF. 19719. New York: United Nations.
UNDP (2016) Human Development Report 2016 Human Development for Everyone.
UNDP. (2015). Uganda Country Gender Assessment. Kampala Uganda.
Vanhoutte, B., & Nazroo, J. (2016). Life-history data. Public Health Res Pract, 26(3).
Wagubi A (2003). The legal and institutional framework governing inheritance in Uganda: A critique of the law and institutions. LL.M diss., Makerere University, Kampala
Westwood, S. (2016). *Ageing, gender and sexuality: Equality in later life*. Routledge.
WHO. (2015). World report on ageing and health. World Health Organization.

Chapter 6

Aboud, F. E., & Singla, D. R. (2012). Challenges to changing health behaviours in developing countries: a critical overview. Social Science & Medicine, 75(4), 589-594.
Aboderin, I. (2004). Modernisation and ageing theory revisited: current explanations of recent developing world and historical Western shifts in material family support for older people. Ageing & Society, 24(1), 29-50.
Achenbaum, W. A., (1995). Crossing frontiers: Gerontology emerges as a science. New York: Columbia University Press.
Achenbaum, W. A. (1987). Can gerontology be a science?. *Journal of aging studies, 1*(1), 3-18.
Adjaye, J. K., & Aborampah, O. M. (2004). Intergenerational cultural transmission among the Akan of Ghana. Journal of Intergenerational Relationships, 2(3-4), 23-38.
Adam, T., Hsu, J., de Savigny, D., Lavis, J. N., Røttingen, J. -A., & Bennett, S. (2012). Evaluating health systems strengthening interventions in low-income and middle-income countries: Are we asking the right questions? *Health Policy and Planning, 27*, iv9–iv19.
Adato, M., & Bassett, L. (2009). Social protection to support vulnerable children and families: the potential of cash transfers to protect education, health and nutrition. *AIDS Care, 21*(sup1), 60-75
Alkema, G. E., & Alley, D. E. (2006). Gerontology's future: An integrative model for disciplinary advancement. *The Gerontologist, 46*(5), 574-582.
Allan LJ, Johnson JA. (2008). Undergraduate attitudes toward the elderly: the role of knowledge, contact and aging anxiety. *Educ Gerontol;35*(1):1–14.
Alkema, G. E., & Alley, D. E. (2006). Gerontology's future: An integrative model for disciplinary advancement. *The Gerontologist, 46(*5), 574-582.
Bailey, A.J. (2009). Population geographies: Lifecourse matters. Progress in Human Geography 33: 407–418.
Bantebya, G., Ochen, E., Pereznieto, P., & Walker, D. (2014). Cross-generational and transactional sexual relations in Uganda. Overseas Development Institute 2014 Report, 1-36.
Beard, J. R., Officer, A. M., & Cassels, A. K. (2016). The world report on ageing and health.
Belli RF.(1998). The structure of autobiographical memory and the event history calendar: potential improvements in the quality of retrospective reports in surveys. *Memory. 6*(4):383–406.
Berkman LF, Glass T, Brissette I, Seeman TE (2000). From social integration to health: Durkheim in the new millennium. *Soc Sci Med;51*(6):843–57.

Bengtson, V. L., & Settersten Jr, R. (Eds.). (2016). Handbook of theories of aging. Springer Publishing Company.
Birren, J. E., (1999). Theories of aging: A personal perspective. In V. L. Bengtson & K. W. Schaie (Eds.), Handbook on theories of aging (pp. 459–471). New York: Springer
Bowen, S., and P.J. Martens. (2006). A model for collaborative evaluation of university-community partnerships. *J Epidemiol Community Health. 60*(10):902–7.
Bryman, Alan. 2012. Social Research Methods. Oxford: Oxford University Press.
Buck, D., & Maguire, D. (2015). Inequalities in life expectancy: Changes over time and implications for policy.
Cargo, M., and S.L. Mercer. (2008). The value and challenges of participatory research: strengthening its practice. *Annu Rev Publ Health. 29*:325–50.
Cacari-Stone, L., Wallerstein, N., Garcia, A. P., & Minkler, M. (2014). The promise of community-based participatory research for health equity: a conceptual model for bridging evidence with policy. *American journal of public health, 104*(9), 1615-1623.
Calasanti, T., & Giles, S. (2018). The challenge of intersectionality. Generations, 41(4), 69-74.
Cesari, M., Araujo de Carvalho, I., Amuthavalli Thiyagarajan, J., Cooper, C., Martin, F. C., Reginster, J. Y., ... & Beard, J. R. (2018). Evidence for the domains supporting the construct of intrinsic capacity. *The Journals of Gerontology: Series A*, 73(12), 1653-1660.
Crenshaw, K. (1990). Mapping the margins: Intersectionality, identity politics, and violence against women of color. Stan. L. Rev., 43, 1241.
Cutchin M. P. (2003). The process of mediated aging in place: A theoretically and empirically based model. Social Science & Medicine, 57, 1077–1090.
Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. (2009). Fostering implementation of health services research findings intopractice: a consolidated framework for advancing implementation science. *Implementation Science;4.*
De Jong Gierveld J, Keating N, Fast J. (2015) Determinants of loneliness among older adults in Canada. *Can J Aging;34*(2):125–36
Ellen, M. E., Panisset, U., de Carvalho, I. A., Goodwin, J., & Beard, J. (2017). A knowledge translation framework on ageing and health. *Health Policy, 121*(3), 282-291.
European Union. (2000). Council directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation. Brussels: Council of the European Union.
Evans RG, Stoddart GL. (2003). Consuming research, producing policy? *American Journal of Public Health;93*(3):371-379.
Evans, R. (2015). HIV-related stigma, asset inheritance and chronic poverty: Vulnerability and resilience of widows and caregiving children and youth in Tanzania and Uganda. *Progress in Development Studies, 15*(4), 326-342.
Goldberg M, Melchior M, Leclerc A, Lert F. (2003). Épidémiologie et déterminants sociaux des inégalités de santé. *Revue d'épidémiologie et de santé publique;51*:381-401.
Haase, D., Güneralp, B., Dahiya, B., Bai, X., & Elmqvist, T. (2018). Global Urbanization. The Urban Planet: Knowledge Towards Sustainable Cities, 19.
Holt-Lunstad J, Smith TB, Layton JB.(2010). Social relationships and mortality risk: a meta-analytic review. PLoS Med;7(7):e1000316.
Hopkins, PE. & Pain, R. (2007). Geographies of age: Thinking relationally. *Area 39:* 287–94.

Israel, B. A., Schulz, A. J., Parker, E. A., & Becker, A. B. (2008). Critical issues in developing and following community-based participatory research principles. In Community-based participatory research for health (pp. 47-62). Jossey-Bass.
Israel BA, Schulz AJ, Parker EA, et al.(1989). Review of community-based research: assessing partnership approaches to improve public health. *Annu Rev Public Health*; 19:173–202.
Joireman, S. F. (2018). Intergenerational land conflict in northern Uganda: children, customary law and return migration. *Africa*, *88*(1), 81-98.
Joosten D. (2007). Preferences for accepting prescribed community-based, psychosocial, and in home services by older adults. *Home Health Care Services Quarterly*, *26*(1), 1–18.
Kangmennaang, J & Elliott, S.J. (2018): 'Wellbeing is shown in our appearance, the food we eat, what we wear, and what we buy': Embodying Wellbeing in Ghana, Health and Place
Katz C and Monk J (1993) Full Circles: Geographies of Women over the Lifecourse. London: Routledge.
King, E.B.A., ALmack, K., & Jones, R. L. (2019). Intersections of Ageing, Gender & Sexualities
Kokkonen, K., Rissanen, S., & Hujala, A. (2012). The match between institutional elderly care management research and management challenges-a systematic literature review. *Health research policy and systems*, *10(*1), 35.
Krekula, C., Nikander, P., & Wilińska, M. (2018). Multiple marginalizations based on age: gendered ageism and beyond. In Contemporary perspectives on ageism (pp. 33-50). Springer, Cham.
Krieger, N. (2011). Epidemiology and the People's Health. Oxford University Press
Krieger N. (2001). Theories for social epidemiology in the 21st century: an ecosocial perspective. *International Journal of Epidemiology;30*(4):668-677.
Kuruvilla, S., Sadana, R., Montesinos, E. V., Beard, J., Vasdeki, J. F., Araujo de Carvalho, I., ... & Koller, T. (2018). A life-course approach to health: synergy with sustainable development goals. *Bull World Health Organ*, *96*(1), 42-50.
Kuteesa, M. O., Wright, S., Seeley, J., Mugisha, J., Kinyanda, E., Kakembo, F., ... & Scholten, F. (2014). Experiences of HIV-related stigma among HIV-positive older persons in Uganda–a mixed methods analysis. SAHARA-J: *Journal of Social Aspects of HIV/AIDS*, *11*(1), 126-137.
Lansley P, McCreadie C, Tinker A. (2004)Can adapting the homes of older people and providing assistive technology pay its way? Age Ageing;33(6):571–6.
Layder, Derek. (1998). Sociological Practice: Linking Theory and Social Research. London: Sage Publications.
LeCompte, M. & Goetz, J. (1982). Problems of reliability and validity in ethnographic research Review of Educational Research 52 1 31–60.
Leeson, G. W. (2018). The Growth, Ageing and Urbanisation of our World. *Journal of Population Ageing*, *11*(2), 107-115
Levy, B. (2009). Stereotype embodiment: A psychosocial approach to aging. *Current directions in psychological science*, *18*(6), 332-336.
Levy, B.R., & Leifheit-Limson, E. (2009). The stereo type matching effect: Greater influence on functioning when age stereotypes correspond to outcomes. *Psychology and Aging, 24,* 230– 233.
Levy, B.R., Zonderman, A., Slade, M.D., & Ferrucci, L. (2009). Negative age stereotypes held earlier in life predict cardiovascular events in later life. *Psychological Science, 20,* 296–298.

Levy, B. R., Slade, M. D., May, J., & Caracciolo, E. A. (2006). Physical recovery after acute myocardial infarction: Positive age self-stereotypes as a resource. *International Journal of Aging & Human Development, 62* (4), 285–301.
Meyer, S.B. and Lunnay B. 2013. The Application of Abductive and Retroductive Inference for the Design and Analysis of Theory-Driven Sociological Research. *Sociological Research Online 1*8(1).
McGadney-Douglass, B. F., & Douglass, R. L. (2008). Collective familial decision-making in times of trouble: intergenerational solidarity in Ghana. *Journal of cross-cultural gerontology, 23*(2), 147.
Muga, G. O., & Onyango-Ouma, W. (2009). Changing household composition and food security among the elderly caretakers in rural western Kenya. *Journal of cross-cultural gerontology, 24*(3), 259-272.
Mugisha, J., Scholten, F., Owilla, S., Naidoo, N., Seeley, J., Chatterji, S., ... & Boerma, T. (2013). Caregiving responsibilities and burden among older people by HIV status and other determinants in Uganda. *AIDS care, 25*(11), 1341-1348.
Mugisha, J. O., Schatz, E., Seeley, J., & Kowal, P. (2015). Gender perspectives in care provision and care receipt among older people infected and affected by HIV in Uganda. *African Journal of AIDS Research, 14*(2), 159-167.
Negin, J., Geddes, L., Brennan-Ing, M., Kuteesa, M., Karpiak, S., & Seeley, J. (2016). Sexual behavior of older adults living with HIV in Uganda. *Archives of sexual behavior, 45*(2), 441-449.
Nyirenda, M., Newell, M. L., Mugisha, J., Mutevedzi, P. C., Seeley, J., Scholten, F., & Kowal, P. (2013). Health, wellbeing, and disability among older people infected or affected by HIV in Uganda and South Africa. *Global health action, 6*(1), 19201.
Nussbaum MC. (2011). Creating capabilities: the human development approach. Cambridge (MA): Harvard University Press.
Nyanzi, S., Emodu-Walakira, M., & Sserwaniko, W. (2009). The widow, the will and widow-inheritance in Kampala: revisiting victimization arguments. Canadian Journal of African Studies, 43, 12–33.
Nyanzi, S., Emodu-Walakira, M., & Serwaniko, W. (2011). Sleeping with My Dead Husband's Brother!': The Impact of HIV and AIDS on Widowhood and WidowInheritance in Kampala, Uganda. The Fourth Wave Violence, Gender, Culture & HIV in the 21st Century. Vinh-Kim Nguyen and Jennifer F. Klot.
Nyqvist F, Cattan M, Andersson L, Forsman AK, Gustafson Y. (2013) Social capital and loneliness among the very old living at home and in institutional settings: a comparative study. J Aging Health. Sep;25(6):1013–35.
Östlin, P., Schrecker, T., Sadana, R., Bonnefoy, J., Gilson, L., Hertzman, C., … Vaghri, Z. (2011). Priorities on research for equity and health: Towards an equity-focused health research agenda. *PLoS Medicine*, 8, e1001115.
Okoye, U. O. (2012). Family care-giving for ageing parents in Nigeria: Gender differences, cultural imperatives and the role of education. *International Journal of Education and Ageing, 2*(2), 139-154.
PAHO (Pan American Health Organization). (2012). Guidelines for mainstreaming the needs of older persons in disaster situations. Washington (DC)
Pearce, J. R. (2018). Complexity and uncertainty in geography of health research: incorporating life-course perspectives. *Annals of the American Association of Geographers*, *108*(6), 1491-1498.
Phillips, D. R., & Cheng, K. (2012). The impact of changing value systems on social inclusion: an Asia-Pacific perspective (pp. 109-24). From exclusion to inclusion in old age. Bristol: Policy Press.
Prior, L., Manley, D., & Sabel, C. E. (2018). Biosocial health geography: New 'exposomic' geographies of health and place. *Progress in Human Geography*, 0309132518772644.

Punch, Keith F. (2000). Developing Effective Research Proposals. London: Sage Publications Ltd.
Ramlagan S, Peltzer K, Phaswana-Mafuya N.(2013). Social capital and health among older adults in South Africa. *BMC Geriatr;13*(1):100.
Rathje, W. L. (1989). The three faces of garbage e Measurements, perceptions, behaviors. *Journal of Management and Technology, 17*, 61e65.
Richards, E., Zalwango, F., Seeley, J., Scholten, F., & Theobald, S. (2013). Neglected older women and men: Exploring age and gender as structural drivers of HIV among people aged over 60 in Uganda. *African journal of AIDS research*, *12*(2), 71-78.
Rishworth, A., Elliott, S.J., Kangmennaang, J. (2019) (accept with revisions). Social Determinants of Subjective Wellbeing Among the Elderly: A Case Study of Uganda. *International Journal of Wellbeing*.
Sadana, R., Blas, E., Budhwani, S., Koller, T., & Paraje, G. (2016). Healthy ageing: raising awareness of inequalities, determinants, and what could be done to improve health equity. T*he Gerontologist*, *56*(Suppl_2), S178-S193.
Santesso N, Tugwell P. (2006). Knowledge translation in developing countries. Journal of Continuing Education in the Health Professions;26:87–96.
Schwanen T, Hardill I and Lucas S (2012) Spatialities of ageing: The co-construction and co-evolution of old age and space. *Geoforum 43*:1291–1295.
Scholten, F., Mugisha, J., Seeley, J., Kinyanda, E., Nakubukwa, S., Kowal, P., ... & Grosskurth, H. (2011). Health and functional status among older people with HIV/AIDS in Uganda. *BMC Public Health*, *11*(1), 886.
Scholtan, F., Seeley, J., Mugisha, J., Zalwango, F., & Wright, S. (2011). Well-being of older people study: A study on global AGEing and adult health (SAGE) sub-study. Medical Research Council/Uganda Virus Research Unit, Research Unit on AIDS, Entebbe, Uganda. Switzerland: World Health Organisation.
Seeley, J., Kajura, E., Bachengana, C., Okongo, M., Wagner, U., & Mulder, D. (1993). The extended family and support for people with AIDS in a rural population in south west Uganda: a safety net with holes?. *AIDS care*, *5*(1), 117-122.
Skinner, M. W., Cloutier, D., & Andrews, G. J. (2015). Geographies of ageing: Progress and possibilities after two decades of change. *Progress in Human Geography*, *39*(6), 776-799.
Stanziano, D. C., Whitehurst, M., Graham, P., & Roos, B. A. (2010). A review of selected longitudinal studies on aging: past findings and future directions. *Journal of the American Geriatrics Society*, *58*, S292-S297.
Tarrant, A. (2010). Constructing a social geography of grandparenthood: A new focus for intergenerationality. *Area*, *42*(2), 190-197.
Tarrant, M. A., & Cordell, H. K. (1997). The effect of respondent characteristics on general environmental attitude-behavior correspondence. *Environment & Behavior, 29*, 618e637.
Thurlow, J., Dorosh, P., & Davis, B. (2019). Demographic Change, Agriculture, and Rural Poverty. In Sustainable Food and Agriculture (pp. 31-53). Academic Press.
Uganda Ministry of Health, ICF International, Centers for Disease Control and Prevention, USAID & WHO Uganda (2012) Uganda AIDS Indicator Survey 2011. August 2012. Kampala, Uganda, Ministry of Health, and Calverton, Maryland, ICF International/Demographic and Health Survey
United Nations (2002). Madrid international plan of action on ageing. Second World Assembly on Ageing (Spain).

United Nations (2000). The right to the highest attainable standard of health. New York: (E/C.12/2000/4, General Comments; http://www.nesri.org/sites/default/files/Right_to_health_Comment_14.pdf
United Nations. (2018). 2018 revision of world urbanization prospects.
Vanhoutte, B., & Nazroo, J. (2016). Life course pathways to later life wellbeing: A comparative study of the role of socio-economic position in England and the US. *Journal of population ageing, 9*(1-2), 157-177.
Wacker RR, Roberto KA. (2011).Aging social policies: an international perspective. Thousand Oaks (CA): Sage Publications.
Wald, H. L., Leykum, L. K., Mattison, M. L., Vasilevskis, E. E., & Meltzer, D. O. (2014). Road map to a patient-centered research agenda at the intersection of hospital medicine and geriatric medicine. *Journal of general internal medicine, 29*(6), 926-931.
Wamara, C. K. (2017). Corruption in Uganda: Does this Have Anything to Do with Social Work?. *Journal of Human Rights and Social Work, 2*(1-2), 52-61.
Warshawsky, D. (2014). The potential for mixed methods: results from the field in urban South Africa. *The Professional Geographer, 66*(1), 160-168.
WHO. (2017). Adelaide Statement II. Implementing the Sustainable Development Agenda through good governance for health and wellbeing: building on the experience of Health in All Policies. Geneva.
WHO. (2013). Transforming and scaling up health professionals' education and training: World Health Organization guidelines. Geneva: World Health Organization.
Wilson, K.(2003). Therapeutic landscapes and First Nations peoples: an exploration of culture, health and place. *Health Place 9*, 83–93.
Wiles, J. L., Allen, R. E., Palmer, et al. (2009). Older people and their social spaces: A study of well-being and attachment to place in Aotearoa New Zealand. *Social Science & Medicine, 68*(4), 664-671.
Wright, S., Zalwango, F., Seeley, J., Mugisha, J., & Scholten, F. (2012). Despondency among HIV-positive older men and women in Uganda. *Journal of cross-cultural gerontology, 27*(4), 319-333.

Appendix A: In Depth Interview Guide with Elderly Participants

Addressing the Determinants of Health and Wellbeing Among Uganda's Elderly Population		
Purpose: To develop understandings of health, wellbeing and age among aging populations ***To identify determinants of health and wellbeing of aging populations.***		
Construct	**Question**	**Probe**
Context	Can you tell me about yourself?	How long have you lived in this community? Married? Adult children or care of grandchildren? Education?
Age (Perceptions)	Do you know your age?	Have a birth certificate? Remember a certain event in the past?
	When does someone become old?	Physical appearance? Societal values? Functional ability?
	Do you think men and women age differently?	How so? In which ways?
	Do you think people are treated differently when they are older?	Family dynamics? Changing attitudes? Discrimination?
	Does age restrict your use of certain services?	How so?
Health (Understandings and Perceptions)	Can you tell me about your health?	How would you describe your health generally?
	What are some of the (biggest) health challenges you experience on a regular basis?	Physical issues: Mobility, asthma, hypertension, vision problems (cataracts)? Psychosocial: Loneliness, isolation, fear, depression?
	How does this impact your daily life?	Physically unable in engage in daily life? Modify activities? Sadness? Isolation?
	How do you cope with health issues?	Social activities/support systems? Alcohol? Food restriction? Smoking?

	Are you able to seek any form of support or care for your challenges?	From whom? Doctor, health provider social support, medication? Why/why not?
	What do you think 'healthy aging' is? Health in old age?	Physically fit? Function? Able to participate socially?
	Are there certain life events you think have contributed to your health?	Migration, sickness, disease, wars, past employment?
	How would you describe your health compared to other elderly individuals in your village?	Why?
Wellbeing (Understandings and Perceptions)	Do you think there are any relations between health and wellbeing?	How so?
	How would you describe or define wellbeing?	Personal wellbeing? Community wellbeing?
	Are there certain places you feel your sense of wellbeing changes?	Home? Friends? Certain location? Idea of something? Why do you think this is?
	In your opinion, could you explain if you feel greater connection or attachment to certain places?	How so?
	Have certain experiences throughout your life shaped these ideas about wellbeing?	In which ways? Trigger memories, events?
Thank you for sharing your thoughts. I'm now going to some questions related to your community environment.		
Determinants of Health and Wellbeing		
Construct	**Question**	**Probe**
Social Factors	How do you think your community treats older people?	Can you trust your neighbours, village members? Do members assist the aged? Why or why not?
	Does this impact your connections to your home?	How so?

	Do you have any form of social support systems?	Family members? Community?
	Does this impact your connections to your neighbourhood or community?	In which ways?
	Do you think family dynamics and social systems are changing?	How so? Is this related to factors of the context? (i.e. limited opportunity? Physical environment?) Or societal values?
	How does this help/hinder your health and wellbeing?	
Economic Factors	Could you describe how you maintain your livelihoods?	Employment? (types, hours), remittance?
	Do you think elderly men and women engage in different activities?	
	Are elderly men or women impacted by land grabbing?	If so, where do they go? Can they resist through legal means?
	Does the government provide any form of subsistence to support you?	Stipend? Pension? Cash grant? National older person policy? Does/does not help?
	If so, how does this work? If not, are they supposed to provide support?	Proof of identification, date of birth?
Political Factors	Are you able to access any form of political assistance? (judicial council, legal protection)	If so what is the process? If not, why do you think it's not provided?
	Do you need proof of identification and date of birth to access certain services? (health/social/legal)	How do you do this? Physical birth certificate?
Environment Factors	Have you experienced changes in the physical environment?	Droughts? Soil erosion? Water shortages? If so how has this impacted your livelihoods?

	Do you think changes in the environment impact your health?	Make it harder to recover from sickness? More likely to get ill? Stress?
Health Services (access, barriers, treatment, cost, transport)	If you are not well, do you feel comfortable going to a health facility?	Why/why not? Fair/poor treatment, stigma?
	Can you tell me about your treatment the last time you went to a health facility? How do you feel the staff/nurses treat you/the elderly?	Experiences positive or negative? Reasons why? Will you continue to use or not?
	What are the challenges you face when accessing a health facility?	Time, cost, travel, care provision, family, stigma, discrimination?
	Do you postpone health care because of other daily tasks/more pressing concerns?	Could you explain? (care provision, employment, weakness, immobility)
	Would you prefer using a traditional practitioner/herbalist than attending a trained health provider?	Why? Easier, perceptions, treatment, religion, cultural factors, hidden costs?
Care Provision	Many elderly are impacted by the effects of HIV/AIDS and are now caring and raising young orphaned children. Could you describe how this impacts the elderly?	In terms of their personal health (physical, emotional, psychological) In terms of their wellbeing? (positive, negative)?
	Have you been impacted by the effects of HIV/AIDS?	Directly? (raising children, personally infected) Indirectly? (community, friends)
	Are there any forms of support available to assist with these impacts?	Government policies, ARV services (for children and elderly)
Other Concerns	Do you have any other types of concerns related to the health and wellbeing of elderly in general?	

	How would you rank these concerns? Have you always felt this? way?	
	How could these concerns be? minimized? What direction do you want to see the government, health professionals and community take to improve the health and wellbeing of the elderly?	Financial support? Social services? Easier access? Improved treatment in health facilities? Legal representation?
Conclusion	Is there anything else you would like to add?	

Appendix B: Focus Group Discussion Guide with Elderly Participants

Addressing the Determinants of Health and Wellbeing Among Uganda's Elderly Population		
Purpose: To develop understandings of health, wellbeing and age among aging populations ***To identify determinants of health and wellbeing of aging populations.***		
Construct	**Question**	**Probe**
Context	Can you tell me about yourself?	How long have you lived in this community? Married? Adult children or care of grandchildren?
Age (Perceptions)	Do you know your age?	Birth Certificate? Remember a certain event?
	When does someone become old?	Physical appearance? Societal values? Functional ability?
	Do you think men and women age differently?	How so? In which ways?
	How so? In which ways?	How so? In which ways?
	Do you think people are treated differently when they are older?	Family dynamics? Changing attitudes? Discrimination?
	Does age restrict your use of certain services?	How so?
Health (Understandings and Perceptions)	Can you tell me about your health?	How would you describe your health generally?
	What are some of the (biggest) health challenges you experience on a regular basis?	Physical issues: Mobility, asthma, hypertension, vision problems (cataracts)? Psychosocial: Loneliness, isolation, fear depression
	How does this impact your daily life?	Physically unable to do tasks? Modify activities? Sadness? Isolation?

	How do you cope with health issues?	Social activities/support systems? Alcohol? Food restriction? Smoking?
	Are you able to seek any form of support or care for your challenges?	From whom? Doctor, health provider social support, medication? Why/why not?
	What do you think 'healthy aging' is? Health in old age?	Physically fit? Function? Able to participate socially?
	Are there certain life events you think have contributed to your health?	Migration, sickness, disease, wars?
	How would you describe your health compared to other elderly individuals in your village?	Why?
Wellbeing (Understandings and Perceptions)	Do you think there are any relations between health and wellbeing?	How so?
	How would you describe or define wellbeing?	Personal wellbeing? Community wellbeing?
	Are there certain places you feel your sense of wellbeing changes?	Home? Friends? Certain location? Idea of something? Why do you think this?
	In your opinion, could you explain if you feel greater connection or attachment to certain places?	How so?
	Have certain experiences throughout your life shaped these ideas about wellbeing?	In which ways? Trigger memories, events?
Thank you for sharing your thoughts. I'm now going to some questions related to your community environment.		
Determinants of Health and Wellbeing		
Construct	**Question**	**Probe**
Social Factors	How do you think your community treats older people?	Can you trust your neighbours, village members? Do members assist the aged? Why or why not?

	Does this impact your connections to your home?	How so?
	Do you have any form of social support systems?	Family members? Community?
	Does this impact your connections to your neighbourhood or community?	In which ways?
	Do you think family dynamics and social systems are changing?	How so? Is this related to factors of the context? (i.e. limited opportunity? Physical environment?)
	How does this help/hinder your health and wellbeing?	
Economic Factors	Could you describe how you maintain your livelihoods?	Employment? (types, hours)
	Do you think elderly men and women engage in different activities to survive?	
	Are elderly men or women impacted by land grabbing?	If so, where do they go? Can they resist through legal means?
	Does the government provide any form of subsistence to support you?	Stipend? Pension? Cash grant? National older person policy? Does/does not help?
	If so, how does this work? If not, are they supposed to provide support?	Proof of identification, date of birth?
Political Factors	Are you able to access any form of political assistance? (judicial council, legal protection)	If so what is the process? If not, why do you think it's not provided?
	Do you need proof of identification and date of birth to access certain services? (health/social/legal)	How do you do this? Physical birth certificate?
Physical Environment Factors	Have you experienced changes in the physical environment?	Droughts? Soil erosion? Water shortages?

		If so how has this impacted your livelihoods?
	Do you think changes in the environment impact your health?	Make it harder to recover from sickness? More likely to get ill? Stress?
Health Services (access, barriers, treatment, cost, transport)	If you are not well, do you feel comfortable going to a health facility?	Why/why not? Fair/poor treatment, stigma?
	Can you tell me about your treatment the last time you went to a health facility? How do you feel the staff/nurses treat you/the elderly?	Experiences positive or negative? Reasons why? Will you continue to use or not?
	What are the challenges you face when accessing a health facility?	Time, cost, travel, care provision, family, stigma, discrimination?
	Do you postpone health care because of other daily tasks/more pressing concerns?	Could you explain? (care provision, employment, weakness, immobility)
	Would you prefer using a traditional practitioner/herbalist than attending a trained health provider?	Why? Easier, perceptions, treatment, religion, cultural factors, hidden costs?
Care Provision	Many elderly are impacted by HIV/AIDS and are now caring and raising young orphaned children. Could you describe how this impacts the elderly?	In terms of their personal health (physical, emotional, psychological) In terms of their wellbeing? (positive, negative)?
	Have you been impacted by the effects of HIV/AIDS?	Directly? (raising children, personally infected) Indirectly? (community, friends)
	Are there any forms of support available to assist with these impacts?	Government policies, ARV services (for children and elderly)
Other Concerns	Do you have any other types of concerns related to the health and wellbeing of elderly in general?	

	How would you rank these concerns? Have you always felt this? way?	
	How could these concerns be? minimized? What direction do you want to see the government, health professionals and community take to improve the health and wellbeing of the elderly?	Financial support? Social services? Easier access? Improved treatment in health facilities? Legal representation?
Conclusion	Is there anything else you would like to add?	

Appendix C 1: Key Informant In-Depth Interview Guide with Government Officials (Federal, Regional, Local) Perceptions of Aging, Health and Wellbeing

To understand key government stakeholder's perceptions and experiences with issues of aging, health and wellbeing		
Construct	**Question**	**Probe**
Context	Can you please tell me about your ministry/department and its involvement with issues of aging? (broadly)	What is your current role? How long? What brought you to this position?
	What are some of the biggest challenges related to aging you've observed over the years? (generally)	How have these changed over time? Which ones have changed? (i.e. health, social issues, care burdens?)
Perceptions and Experiences of Elderly Health and Wellbeing	What is your perception of the general health and wellbeing of the aged in Uganda?	Do specific regions experience different issues? In which ways?
	What do you think are the biggest health challenges of the elderly?	Infectious disease? (HB, HIV/AIDS) Chronic disease? (hypertension, diabetes/stroke)
	Do you think the elderly have many functional challenges? (i.e. completing daily tasks)	In which ways?
	How do you think this impacts their overall wellbeing?	
	Do you think certain people are more likely to be healthy in old age or have better wellbeing than others?	Poor/rich, educated/uneducated, distance? Why/ why not?
	Do you think elderly men and women face distinctly different challenges?	In which ways? Men? Women? Similarities?
	What do you think are the greatest challenges for elderly to age well (healthily, with dignity)?	

Policy Context	What strategies have you/government/officials used to get information to elderly?	Community visits, radio, campaigns?
	What services do you provide for the elderly?	Is this available and accessible to all elderly in the country? Specific region?
	What do the elderly need to do to access/use policies and services?	Proof if birth? Identification? Cost involved?
	Do you think current health and social policies adequately address the needs of the elderly?	Are there any changes that you think would help improve this situation?
	What do you think are the biggest obstacles for the future health and wellbeing of elderly populations?	What can the government do?
	What would you like to see changed?	To help your organization? Improve the health and wellbeing of the aged?
Discussion	Is there anything else you would like to add that we have not discussed?	

Appendix C 2: Key Informant In-Depth Interview Guide with Health Providers

To understand health provider's perceptions and experiences with issues of aging, health and wellbeing		
Construct	**Question**	**Probe**
Context	Can you please tell me about your ministry/department and its involvement with issues of aging? (broadly)	What is your current role? How long? What brought you to this position?
	What are some of the biggest challenges related to aging you've observed over the years? (generally)	How have these changed over time? Which ones have changed? (i.e. health, social issues, care burdens?)
Perceptions and Experiences of Elderly Health and Wellbeing	What is your perception of the general health and wellbeing of the aged in Uganda?	Do specific regions experience different issues? In which ways?
	What do you think are the biggest health challenges of the elderly?	Infectious disease? (HB, HIV/AIDS) Chronic disease? (hypertension, diabetes/stroke)
	Do you think the elderly have many functional challenges? (i.e. completing daily tasks)	In which ways?
	How do you think this impacts their overall wellbeing?	
	Do you feel adequately equipped to manage the health needs of the elderly?	Why or why not?
	Did you receive any geriatric training, education?	In school? Institutional training?
	Do you think certain people are more likely to be healthy in old age or have better wellbeing than others?	Poor/rich, educated/uneducated, distance? Why/ why not?
	Do you think elderly men and women face distinctly different challenges?	In which ways? Men? Women? Similarities?

	What do you think are the greatest challenges for elderly to age well (healthily, with dignity)?	
Policy Context	What strategies have you/government/officials used to get information to elderly?	Community visits, radio, campaigns?
	What services do you provide for the elderly?	Is this available and accessible to all elderly in the country? Specific region?
	What do the elderly need to do to access/use policies and services?	Proof if birth? Identification? Cost involved?
	Do you think current health and social policies adequately address the needs of the elderly?	Are there any changes that you think would help improve this situation?
	What do you think are the biggest obstacles for the future health and wellbeing of elderly populations?	What can the government do?
	What would you like to see changed?	To help your organization? Improve the health and wellbeing of the aged?
Discussion	Is there anything else you would like to add that we have not discussed?	

Appendix C 3 : Key Informant In-Depth Interview Guide with Non- Governmental Institutions Perceptions of Aging, Health and Wellbeing

To understand key government stakeholder's perceptions and experiences with issues of aging, health and wellbeing		
Construct	**Question**	**Probe**
Context	Can you please tell me about your organization and its involvement with issues of aging? (broadly)	What is your current role? How long? What brought you to this position?
	What are some of the biggest challenges related to aging you've observed over the years? (generally)	How have these changed over time? Which ones have changed? (i.e. health, social issues, care burdens?)
Perceptions and Experiences of Elderly Health and Wellbeing	What is your perception of the general health and wellbeing of the aged in Uganda?	Do specific regions experience different issues? In which ways?
	What do you think are the biggest health challenges of the elderly?	Infectious disease? (HB, HIV/AIDS) Chronic disease? (hypertension, diabetes/stroke)
	Do you think the elderly have many functional challenges? (i.e. completing daily tasks)	In which ways?
	How do you think this impacts their overall wellbeing?	
	Do you think elderly men and women face distinctly different challenges?	In which ways? Men? Women? Similarities?
	What do you think are the largest obstacles for elderly to age well (healthily, with dignity)?	
Policy Context	What strategies have you/NGOs used to get information to the elderly?	Community visits, radio, campaigns?
	What services do you provide for the elderly?	Is this available and accessible to all elderly in the country? Specific region?
	How does this compare to the government policies?	Differences/similarities?

	What do the elderly need to do to access/use the services provided by your organization?	Proof if birth? Identification? Cost involved?
	Do you think current health and social policies in the county/region adequately address the needs of the elderly?	Are there any changes that you think would help improve this situation?
	What do you think are the biggest obstacles for the future health and wellbeing of elderly populations?	What can the government do?
	What would you like to see changed?	To help your organization? Improve the health and wellbeing of the aged?
Discussion	Is there anything else you would like to add that we have not discussed?	

Appendix D: A Report of a Multi-Stakeholder Meeting Held in Mukono, Uganda to Discuss Research Activities and Needs

Submitted to:

ROTOM

Submitted by:

Andrea Rishworth

Susan J. Elliott

Department of Geography & Environmental Management

University of Waterloo

January 14th, 2018

Table of Contents

Executive Summary

Uganda's older population (60+) is growing. By 2050, the older population is projected to rise from 1.3 in 2010 to 5.5 million. Elderly people in Uganda face serious health and wellbeing challenges (e.g. frailty, functional decline, chronic disease, poor housing, social isolation, financial limitations). However, little research has examined the specific determinants of health and wellbeing among Uganda's elderly population. To address this gap, research was conducted with elderly individuals and key informants in the Greater Mukono District during 2017-2018. To put the research findings into practice, a workshop was conducted with multiple stakeholders at the ROTOM facility in Mukono. During the workshop, research results were presented, and participants engaged in roundtable discussions.

This report presents findings from the workshop roundtable discussions. After participants were presented with the research results, participants indicated they were better equipped to conduct work for aging populations. Specifically, participants determined they could improve education and knowledge distribution, foster collaborative and integrative networks, empower and engage with older people and involve different government structures in their work. A future agenda for aging research was also identified. New research is needed to focus on life course and intergenerational dynamics, care relations, health, and government and political systems. This research must employ a variety of research approaches and designs.

The workshop provided the first step towards moving research into action. Organizations, institutions and government structures must continue to make aging research a priority in order to develop relevant interventions that can effect change across the country.

1.0 Introduction

1.1 Background

Sub-Saharan Africa is the fastest aging global region. Older populations (60+) are projected to increase 13-fold from 56 million to 716 million by the end of the century. Uganda is experiencing a similar trend. By 2050, the older population is projected to rise from 1.3 in 2010 to 5.5 million. This growth is concerning since older people in Uganda, like the rest of SSA, already have the highest burden of disease and lowest levels of happiness globally. On top of this, older populations are living in fragile environmental (e.g. droughts, famine, floods), socioeconomic (e.g. unemployment, poverty, crime), cultural (e.g. changing family structures, gender norms), and political conditions. Even still, some elderly populations are raising orphans and vulnerable children due to the ravages of HIV/AIDS, yet with insufficient government support. Despite these many challenges, older persons across the continent are neglected in planning, development strategies, and project implementation. Governments are more concerned about providing for the needs of the youthful populations than addressing the concerns of the elderly.

Considering little research attention has focused on older populations in Uganda, the Health and Wellbeing of Older People in Uganda research study was conducted in 2017-2018 to examine the specific

determinants of health and wellbeing among elderly people. Research was conducted in partnership with the University of Waterloo, Canada and Reach One Touch One Ministries (ROTOM). This partnership ensured research results would be relevant to the needs of those working with elderly in Uganda and allow them to be easily translated into policy and practice.

1.2 Workshop Overview

The Aging, Health and Wellbeing Workshop occurred on December 6th, 2018 at the ROTOM facility in Mukono Uganda and brought together a variety of stakeholders from Uganda, Canada, United States and Ethiopia. The purpose of the workshop was threefold:

a) To bring together a variety of stakeholders to share research results;
b) To put research into action;
c) To develop a research agenda for aging, health and wellbeing.

The workshop comprised two main sessions. The first morning session was devoted to presenting and discussing research for aging populations. Rishworth presented research results collected in 2017-2018 (See Appendix 2.5). ROTOM, COHESU, and ARCAD also presented work related to aging populations (See Appendix 2.6, 2.7) The afternoon session was devoted to roundtable discussions centering on two main topics.

The first topic focused on moving research results into action. Participants were asked:

1) What can we do with the research information now?

The second table discussion focused on developing a research agenda going forward. Participants were asked:

2) What is it that you feel you need to know, that we have no answers for? Results from these discussions are presented below.

2.0 Results

2.1 Round table 1: What can we do with the research results?

Results from the first roundtable discussions centered around four main themes. These are: education and distribution of knowledge, collaboration and integration, empowerment and engagement, and government involvement.

2.1.1 Education and dissemination of knowledge

Stakeholders identified research information could be used for education and knowledge distribution. Participants recognized results could be used to:

- Develop a concept paper to be shared with different government ministries, organizations, and educators;
- Develop tools and guidelines to monitor older persons' issues (e.g. health; social, economic, etc.);
- Create soft and hard copy reports for NGOs and government bodies across scales (e.g. village, parish, subdistrict, district, national level);
- Distribute knowledge through different platforms (e.g. Barraza's, NGOs forums, community/government meetings) at multiple levels (e.g. village to national level)

2.1.2 Collaboration and integration

Stakeholders identified research information could be used to foster collaboration and integration across different sectors and institutional levels in the country. Participants indicated results could help to:

- Engage government structures and councils of older persons at all levels. Since older persons have representation at all government levels, these representation structures should be provided with the information to increase knowledge and awareness;
- Develop collaborative relationships with different organizations and government sectors to strengthen aging programs.
- Participants indicated that an organization should be assigned to develop a list of organizations and NGOs that are currently providing support/are willing to support older persons. This would allow groups to align, prioritize and develop synergistic relationships.

2.1.3 Empowerment and engagement with older persons

Stakeholders identified research information could be used to empower and engage older persons. Participants highlighted results could be used to:

- Educate older persons about their rights in order to empower them in daily lives;
- Engage older adults in programs to educate and prepare younger populations for old age;
- Encourage older people to develop and join groups for their economic development, social engagement, and spiritual needs;
- Educate older people about table banking so they can become economically empowered;
- Champion elderly issues so they become part of government budgeting and resource allocation within all government levels;
- Develop advocacy campaigns (e.g. radio, newspaper, media, television, etc.) to educate elderly and the general population about aging.

2.1.4 Engage with Policy and Decision Makers

Stakeholders identified research information could be used to engage and involve government structures at all levels. Participants signalled results could be used to:

- Engage different committees within the Ministry of Gender.

    - Results could be shared with Emily Ajambo (Minister of Gender). She could then disseminate information to other committee members;
    - Share information with the Ministry of Health to ensure elderly health issues become part of the new health guidelines (to be developed by 2020);
    - Share information with the National Council for Older Persons. This will provide the council with more information to advocate for the rights of the elderly;
    - Engage government structures to ensure that aging is considered in all new policies and programs.
    - Advocate that aging is part of the government's quarterly and annual meetings.

2.2 Round table 2: What is it that you feel you need to know, that we have no answers for?

Information from the second roundtable discussion centered around 5 main themes. Participants indicated that a future research agenda needs to address: life course and intergenerational dynamics, care relations, health, and government and political systems. Moreover, research must use a variety of different research approaches and designs.

2.2.1 Life course and intergenerational dynamics

Life course and intergenerational dynamics was identified as an important area for future research. Questions of interest are:

- How can society benefit from the knowledge of the elderly?
- What are examples of intergenerational programming that can be adapted to the Ugandan context?
- What are the ways to implement concepts of aging, life course and intergenerational knowledge into school curriculum at all levels (baby school, primary, secondary, post secondary)?
- How do youth and adults perceive intergenerational linkages?
- What are ways to foster intergenerational linkages in society?
- How do older people and society generally perceive the concept of life course?
- Do these perceptions have implications for aging people?
- How are issues related to intergenerational gaps addressed in the context of Uganda?
- What are ways to improve intergenerational linkages?
- What are strategies that can be used to enable younger generations to seek employment related to the elderly (health care, social support, etc.)?

2.2.2 Care Relations

Care relations were identified as an important area for future research. Questions of interest are:

- What are the views surrounding caregiving? Is it perceived as a burden?

- Who would older people prefer to receive care from? (e.g. health, social care, family members, young vs old)
- What are the trajectories experienced by care givers and care recipients?

2.2.3 Health

Health was identified as an important area for future research. Questions of interest are:

- How do elderly people cope with the cost of health care in the absence of insurance?
- What are the barriers to implementing geriatric wards in Ugandan hospitals?
- How can these barriers be addressed?
- What are the barriers to providing geriatric medicine at health facilities?
- What are strategies to overcome these barriers?
- What are the most prevalent non-communicable diseases among older persons in Uganda?
- Why are they dominant? Can they be linked to one's life course?
- What are the sicknesses and health concerns of older persons? Are they real or perceived?

2.2.4 Government and political systems

Government and political systems were identified as an important area for future research. Questions of interest are:

- What are the barriers to creating opportunities for older person representation in national parliament?
- How can these barriers be addressed?
- What are the obstacles to a national SAGE program?
- What are the procedures to overcome these obstacles?
- What are the opportunities for the national government to prepare the population for aging?
- What are the specific techniques and procedures the government (at different levels) could use to educate and raise awareness of aging?

2.2.5 Employ different research approaches and designs

The use of different research approaches and designs was identified as an important area for development.

Areas for future research center around designs that encompass:

- Comparative studies on rural-urban differences;
- Comparative studies within and between communities and age groups;
- Life course and longitudinal studies;
- Qualitative research with both older and younger populations to acquire in depth knowledge;

- Quantitative research with both older and younger populations to identify patterns, interactions, and trends.

3.0 Conclusion

The Aging, Health and Wellbeing Workshop provides the first step towards moving research into action. Organizations, institutions and government structures must continue to make aging research a priority in order to develop relevant interventions that can effect change across the country and beyond.

AGENDA

Aging, Health and Wellbeing Workshop

December 6th, 2018

Location	**Contact numbers for the day**
Reach One Touch One Ministries (ROTOM) https://reachone-touchone.org/ug/ Global Jr Access, +256 392 299 588 Mukono, Uganda	**Andrea Rishworth** Local Number: +25677 3877653 Canadian Number: 00015195363232 Email: arishwor@uwaterloo.ca **Zachariah Mulawa** Local Number +256782 019098/ +256704813220 Email: zacmulawa@gmail.com **Kenneth Mugayehwenkyi** Local Number: +256788832418 Email: edrotom@reachone-touchone.org

By the end of this workshop, you will:

By the end of this workshop, you will:

1) Have an increased appreciation for the role of research in addressing the health and social care needs of seniors;
2) Identify the opportunities for evidence-informed decision making at a range of spatial scales (local, district and national policy levels);
3) Identify opportunities within your own organization to render actionable the research results presented.

8:30 - 9:00	Guests arrive at ROTOM – Outdoor Tent – tea and light snacks available
9:00 – 9:30	Words of welcome from Kenneth M; ED ROTOM International Words of welcome from Professor Susan Elliott, University of Waterloo, Canada Recognition of special guests (Elliott)

9:30 – 10:00	Introduction to the workshop and agenda review (Elliott) Table introductions (Elliott) - What is your name? - With what organization are you affiliated? - How does your work/the work of your organization link to the health and social care needs of seniors?
10:00 – 10:45	Review of Research Work Conducted in 2018 by Andrea Rishworth
10:45-11:00	Q & A
11:00 – 11:30	**Tea break**
11:30 – 12:00	The work of the Research Centre for Aging and Dementia (ARCAD) for Uganda, followed by discussion (Isaac Ddumba; Assistant District Health Officer, Mukono Local Government)
12:00 – 12:30	Opportunities for East African Partnership: The Work of COHESU and ROTOM (Dr. Diana Karanja and Kenneth Mugayehwenkyi)
12:30 – 1:00	Research Needs for Health and Social Care of Seniors (Dr. Aggrey Semeere, Chair, ROTOM Medical committee)
1:00 – 2:00	**Lunch**
2:00 – 2:30	Turning evidence into action: Opportunities for Science Policy Bridging (Elliott)
2:15 – 2:30	Report back/plenary
2:30 – 3:00	What are the gaps? What is it that we still do not know that we would like research to address for us?
3:00 – 3:15	Plenary
3:15 – 3:30	**Tea break**

3:30 – 4:00	Group discussion: What are the most important take home messages from the discussions today? • Think about what you would like to see done FIRST, SECOND, THIRD, etc. • What would your organization do right now if resources were not an issue? • Who are the (research or action) partners who needed to be here today but were not? How can we get them to the table? • Anything else you feel must get on the record for this meeting?
4:00 – 4:15	Wrap up, thank yous and next steps (Rishworth, Elliott and Kenneth M)

Appendix E: Good Reporting of A Mixed Methods Study (GRAMMS)

Guideline

Describe the justification for using a mixed methods approach to the research question

Describe the design in terms of the purpose, priority and sequence of methods

Describe each method in terms of sampling, data collection and analysis

Describe where integration has occurred, how it has occurred and who has participated in it

Describe any limitation of one method associated with the present of the other method

Describe any insights gained from mixing or integrating methods

O'Cathain A, Murphy E, Nicholl J. The quality of mixed methods studies in health services research. J Health Serv Res Policy. 2008;13(2):92-98.

Appendix F: ROTOM Selection Criteria

ROTOM BENEFICIARY SELECTION CRITERIA

ROTOM selection criteria aims at ensuring ROTOM reaches the most vulnerable and in need. The following guidelines will be followed in selecting new beneficiaries to benefit from ROTOM support.

1) Should not discriminate older citizens against their race or creed
2) A senior citizens should be as older as possible preferably from 65 years or above
3) Should be from poorest of the poor families
4) Older people from those who are unable to work as the result of their age and health problem
5) Older citizens who are take care of their grandchildren that lost their parents because of HIV/ADIS
6) Widows senior citizen who find themselves dealing the loss of their children, spouse or health problems
7) Attention be given to single female headed households and Vulnerable older people who are marginalized widows and with disabilities
8) Older people who are willing to participate in programs offered by ROTOM
9) Older people who are not enrolled in any supporting organization or program
10) Older people facing failing health and find difficult to access medical care
11) Older people who has no regular source of income or family support
12) Uganda is estimated to have to be 80% Christian organization, to promote inclusion, efforts should be made to see to it that 20% of beneficiaries selected for support are non-Christians.